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TABLES RELATING TO RAYLEIGH SCATTERING  
OF LIGHT IN THE ATMOSPHERE  
(Numerical Solution of  
Gandrasekhar's Equations)

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FOREWORD

The tables given in this report were prepared by the National Bureau of Standards, Institute of Numerical Analysis, Los Angeles, California, as authorized under L.P. 701.

This report is an extension, on the infrared side, of the "Tables Relating to Rayleigh Scattering of Light in the Atmosphere," University of California at Los Angeles, Department of Meteorology, Scientific Report Number 3, Contract Number AF 19(122)-239. These tables present numerical solutions of the equations first derived by S. Chandrasekhar, Professor of Theoretical Astrophysics, University of Chicago, in his outstanding book "Radiative Transfer" Oxford at the Clarendon Press, 1950.

This report was reviewed for technical accuracy by Dr. F. E. Roach and Dr. Gertrude Blanch.

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#### ABSTRACT

The theory of molecular scattering of light in a plane-parallel atmosphere, presented in the simplest form by Lord Rayleigh, was recently extended in an ingenious way by Chandrasekhar to cover the process of multiple scattering and the effect of the reflection from the ground.

The computation of the intensity and polarization of the sky radiation by this theory requires the solution of four pairs of non-linear integral equations, obtained in the general case by successive iteration. For small values of the optical thickness  $\tau$  ( $\tau \leq 0.10$ ), the second approximation is an adequate approximation. The following tables present the result of computation based on the second approximation only. They contain the intensities in the direction perpendicular and parallel to the vertical plane through the zenith and the sun (sun's vertical) for different zenith distances along this plane and for different zenith distances of the sun.

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## INTRODUCTION

All problems dealing with any type of radiation transfer through the atmosphere can be reduced to the problem of light scattering. During the interaction of the radiation with matter some part of the absorbed energy may reappear as radiation of the same wave length radiated from the matter in directions other than the incident radiation. This scattered radiation has different characteristics according to the physical properties of the matter. To evaluate quantitatively the character of the scattered radiation is, in general, a difficult task. In the special case when the scattering material is dielectrical, the dimensions of the scattering particles are small compared with the wave length of the radiation, and the radiation is not absorbed by the particles, the scattered radiation is described by a well-known law discovered by Lord Rayleigh. This type of scattering is usually named "Rayleigh" or "molecular" scattering. It is only for this case that an exact solution of the radiation transfer in a plane parallel atmosphere has been obtained.

In most problems the atmosphere can be considered to be plane-parallel illuminated by a parallel beam of unpolarized light, of the net flux (the rate of flow of radiant energy per unit frequency interval and per unit area normal to the incident direction) equal to  $\pi F_0$ . The net flux of the sun radiation is reduced during its passage through the atmosphere. At a level  $z$  above the ground the reduced flux is given by the equation

$$(1) \quad \pi F = \pi F_0 \exp(-\tau/\mu_0)$$

where  $\pi F_0$  represents the flux at the upper limit of the atmosphere (extraterrestrial value),  $\mu_0 = \cos \theta_0$ ,  $\theta_0$  being the zenith distance of the sun. The parameter  $\tau$ , called optical thickness, depends upon the number of scattering centers (molecules), and their refractive indices as discussed in detail elsewhere (Ref. 1). Since  $\tau$  increases with the distance from the upper limit of the atmosphere, it can be used instead of the vertical coordinate  $z$ . Furthermore, it depends upon the inverse fourth power of the wave length and thus determines for each level of the atmosphere the wave length of the monochromatic light, for which the result is valid.

The scattered radiation has, however, a completely different character. It is not a parallel radiation, since each scattering center becomes a source of a spherical wave around the center. Each point within the atmosphere is illuminated by scattered radiation from all directions, and its illumination can be measured by the rate of flow of the radiant energy through a cone, with its apex at the point and with the axis in any particular direction. The rate of flow is then proportional to the solid angle which the cone intercepts. The proportionality factor in this relationship, called the specific intensity or simply the intensity, is the quantity which must be determined for the specific problems that arise. The scattered radiation is in general polarized, i.e., the intensity has different values, in different directions, in a plane normal to the direction of observation. For a complete quantitative description of the scattered radiation, it is thus necessary to introduce, besides the intensity  $I$ , other parameters, defining the state of polarization of the radiation. This can be done most conveniently by defining the state of polarization by a set of three additional Stokes parameters,  $Q$ ,  $U$ ,  $V$ , the meaning of which is discussed in detail by Chandrasekhar (Ref. 2).

Computation of the intensity and of the polarization of the sky radiation is not a simple problem. It was made first by Lord Rayleigh, under a simplifying assumption of primary scattering only, when the scattering process of the light already scattered was neglected. The extension of his theory for the more realistic case of multiple scattering, when no restriction is applied to the scattering of the light scattered once or several times before, is connected with difficulties, considered unsurmountable not a long time ago. In 1947 Chandrasekhar succeeded in reducing the exact solution of the problem to the solution of four pairs of non-linear integral equations, allowing a solution by iteration. The computation of the intensity and the polarization parameters according to the method described in detail by Chandrasekhar (Ref. 2) was performed for three values of the optical thickness ( $\tau = 0.15$ ,  $0.25$  and  $1.00$ ). These results were published in Ref. 3. The following tables represent the continuation of the computation for smaller values of the optical thickness, corresponding to the red and infrared part of the spectrum for normal conditions at the sea level.

For small  $\tau$ , as predicted by the theory, the computation can be simplified because of the fact that the effect of multiple scattering is decreasing and the second approximation, corresponding to the secondary scattering, is so close to the exact value, that further iteration is not necessary for all practical purposes. The first iteration of the above-mentioned integral equations leads to analytical expressions for the fundamental functions  $Y^{(1)}$  and  $Y^{(1)}$  ( $i = 1, 2, 3, 4$ ), given in Ref. 2 and discussed in the following

section. The values of these functions for  $\nu = 0.10, 0.05, 0.02$ , and  $0.01$  are tabulated in Table 1 as functions of  $\mu$ , corresponding to different zenith distances. In further computations their moments of two different kinds are needed; these are tabulated in Table 2.

The intensity and the polarization of the sky radiation is in general different in different directions, thus varying with the zenith distance and with the azimuth of the direction of observation. In the computation the terms dependent on the azimuth and the terms independent of the azimuth are separated. The terms dependent on the azimuth include the first two pairs of the X and Y functions,  $(X^{(1)} \text{ and } Y^{(1)})$  for  $i = 1, 2$ . The azimuth-independent terms contain the remaining two pairs ( $i = 3, 4$ ) of X and Y functions in a more complicated relationship, conveniently expressed in terms of eight functions:  $\psi, \phi, \xi, \eta, \zeta, \delta, \chi, \sigma$ . These functions are linear combinations of the  $X^{(i)}$  and  $Y^{(i)}$  ( $i = 3, 4$ ). The constants in these combinations are functions of the moments tabulated in Table 2. The values of the eight functions mentioned above are given in Table 3, the constants used for their computation in Table 4.

The polarization of sky radiation is relatively simple in all directions along the sun vertical, the vertical plane through the zenith and toward the sun. The simplification is caused by the fact that along this plane  $U = 0$ , the plane of polarization is either parallel or perpendicular to the sun vertical. In such a case the state of polarization is completely defined by two intensities  $I_\ell$  and  $I_r$ , in the direction parallel and perpendicular to the sun vertical. These intensities are related to the mentioned total intensity  $I$  and the parameter  $Q$  by the formulae

$$(2) \quad I = I_\ell + I_r, \quad Q = I_\ell - I_r.$$

From the general form of the expressions for  $I_\ell$  and  $I_r$  (3, 4) it is evident that the intensity  $I_r$  has the same value on the solar side of the sun vertical, where  $\phi = \phi_0$ , and on the antisolar side, where  $\phi = \phi_0 + \pi$ , whereas the intensity  $I$  has different value on the solar and antisolar sides, denoted by  $I_\ell$  and  $I_{\ell a}$  respectively. The values of the intensities  $I_\ell, I_{\ell a}, I_r$  along the sun vertical for  $F_0 = 1$  are tabulated in Table 5, for different sun elevation, and for several optical thicknesses.

Chandrasekhar extended Rayleigh's original theory also in another direction. The effect of the reflection from the ground

was incorporated for the case of the reflection according to the Lambert's law. It is assumed that the reflected radiation is independent of the direction, unpolarized, and the total flux upward is a fraction (albedo  $\lambda < 1$ ) of the flux received from above. The effect of the ground reflection can be expressed by the corrections to the intensities  $I_L$  and  $I_R$ , denoted accordingly by  $I_L^*$  and  $I_R^*$ . These corrections can be computed by means of two functions  $\gamma_L^*$ ,  $\gamma_R^*$  tabulated in Table 3 and of a constant  $\bar{s}$ , given in Table 4. The correction for the intensity  $I_L$  is the same on both sides of the sun vertical, thus the subscript  $a$  is omitted. The values of these corrections are incorporated in Table 5 for  $\lambda = .25, .50, .80$ .

As explained in the following section, for very small values of  $\tau$  some of the terms become so small that the computational scheme, used for the moderate values of  $\tau$  does not lead to a result with a satisfactory accuracy. In this case the effect of the secondary scattering is so small that the primary scattering is quite predominant. The computational scheme above can then be replaced by the formulae given below, easily derived from the equation of the radiative transfer (p. 44 in Ref. 2):

$$\begin{aligned}
 I_L(\mu, \varphi) &= E(\tau, \mu, \mu_0) \left\{ 2(1-\mu^2)(1-\mu_0^2) + \mu^2(1+\mu_0^2) \right. \\
 &\quad \left. + 4\mu\mu_0(1-\mu^2)^{\frac{1}{2}}(1-\mu_0^2)^{\frac{1}{2}}\cos(\varphi_0-\varphi) - \mu^2(1-\mu_0^2)\cos 2(\varphi_0-\varphi) \right\}, \\
 (3) \quad I_R(\mu, \varphi) &= E(\tau, \mu, \mu_0) \left\{ 1+\mu_0^2 + (1-\mu_0^2)\cos 2(\varphi_0-\varphi) \right\}, \\
 U(\mu, \varphi) &= 2E(\tau, \mu, \mu_0) \left\{ 2\mu_0(1-\mu^2)^{\frac{1}{2}}(1-\mu_0^2)^{\frac{1}{2}}\sin(\varphi_0-\varphi) - \mu(1-\mu_0^2)\sin 2(\varphi_0-\varphi) \right\},
 \end{aligned}$$

with

$$E(\tau, \mu, \mu_0) = \frac{3\mu_0 F_0}{32(\mu_0 - \mu)} \left[ e^{-\tau/\mu_0} - e^{-\tau/\mu} \right].$$

( $\varphi_0 - \varphi$  being the azimuth difference of the vertical plane from the sun's vertical.) For the sun's vertical these expressions reduce to the following:

$$(4) \quad \left. \begin{array}{l} I_L \\ I_{La} \end{array} \right\} = 2E(\tau, \mu, \mu_0) \left[ \mu \mu_0 \pm (1-\mu^2)^{\frac{1}{2}}(1-\mu_0^2)^{\frac{1}{2}} \right]^2$$

$$I_r = 2E(\tau, \mu, \mu_0) .$$

With the values of  $I_L$ ,  $I_{La}$  and  $I_r$  in Table 5, the corresponding values for any other direction in a vertical plane of the azimuth  $\varphi$  can be readily computed, as proved elsewhere (Ref. 3):

$$(5) \quad \begin{aligned} I_L(\mu, \varphi) &= I_L \cos^2 \frac{1}{2}(\varphi_0 - \varphi) + I_{La} \sin^2 \frac{1}{2}(\varphi_0 - \varphi) + \mu^2 Z \sin^2(\varphi_0 - \varphi) , \\ I_r(\mu, \varphi) &= I_r - Z \sin^2(\varphi_0 - \varphi) , \end{aligned}$$

$$U(\mu, \varphi) = \frac{1}{2\mu}^{-1} (I_L - I_{La}) \sin(\varphi_0 - \varphi) - \mu Z \sin 2(\varphi_0 - \varphi) ,$$

with

$$Z = \frac{3\mu_0(1-\mu_0^2)}{16(\mu-\mu_0)} \left\{ X^{(2)}(\mu_0) Y^{(2)}(\mu) - Y^{(2)}(\mu_0) X^{(2)}(\mu) \right\}$$

and  $X^{(2)}$  and  $Y^{(2)}$  as given in Table 1.

## NUMERICAL ANALYSIS

### THE X AND Y FUNCTIONS

These functions are basic in what is to follow, and a full discussion of their properties is given by Chandrasekhar (Ref. 2). We shall state here without proof some of these properties, and reference will be made to equations of Chandrasekhar's text; thus RT(126), will imply equation (126) in Chandrasekhar's text. Unless otherwise specified, Chapter VIII will be implied. By definition

$$(6) \quad X^{(k)}(\mu, \tau) = 1 + \mu T_1(X^{(k)}, Y^{(k)})$$

$$(7) \quad Y^{(k)}(\mu, \tau) = e^{-\tau/\mu} + \mu T_2(X^{(k)}, Y^{(k)})$$

where

$$(8) \quad T_1(X^{(k)}, Y^{(k)}) = \int_0^1 \frac{\psi_k(t) [X^{(k)}(\mu, \tau) X^{(k)}(t, \tau) - Y^{(k)}(\mu, \tau) Y^{(k)}(t, \tau)] dt}{\mu + t};$$

$$(9) \quad T_2(X^{(k)}, Y^{(k)}) = \int_0^1 \frac{\psi_k(t) [Y^{(k)}(\mu, \tau) X^{(k)}(t, \tau) - X^{(k)}(\mu, \tau) Y^{(k)}(t, \tau)] dt}{\mu - t}.$$

In the above the characteristic function  $\psi_k(t)$  is an even polynomial in  $t$ , satisfying

$$\int_0^1 \psi_k(t) dt \leq \frac{1}{2}.$$

The following four polynomials are considered in this discussion:

$$k = 1, \psi_k(t) = \frac{3}{8}(1+t^2-2t^4); \quad k = 2, \psi_k(t) = \frac{3}{16}(1+2t^2+t^4);$$

$$k = 3, \psi_k(t) = \frac{3}{4}(1-t^2) \text{ — the } \underline{\text{conservative}} \text{ case; } k=4, \psi_k(t) = \frac{3}{8}(1-t^2).$$

Whenever no ambiguity is likely to arise, the functions defined in (6) and (7) will be abbreviated by  $X$  and  $Y$ , respectively.

Let

$$x_n^{(k)}(\tau) = \int_0^1 t^n \psi_k(t) X^{(k)}(t, \tau) dt; \quad y_n^{(k)}(\tau) = \int_0^1 t^n \psi_k(t) Y^{(k)}(t, \tau) dt;$$

$$\alpha_n^{(k)}(\tau) = \int_0^1 t^n X^{(k)}(t, \tau) dt; \quad \beta_n^{(k)}(\tau) = \int_0^1 t^n Y^{(k)}(t, \tau) dt.$$

For the sake of simplicity, the "moments" defined above will usually be indicated by  $x_n, y_n, \alpha_n$ , and  $\beta_n$ ; the parameter  $\tau$  will always be dropped and  $k$  will be indicated only when necessary. A property of fundamental importance is given in (29RT), namely

$$(10) \quad x_0 = \frac{1}{2}(x_0^2 - y_0^2) + \int_0^1 \psi_k(t) dt.$$



Chandrasekhar has shown that: for  $k = 3$  (the conservative case) the solutions of (6) and (7) are not unique; and that if  $X, Y$  form one set of solutions, then the set  $\bar{X}, \bar{Y}$  defined by

$$(11) \quad \bar{X} = X + \mu q(X+Y); \quad \bar{Y} = Y - \mu q(X+Y)$$

also satisfies (6) and (7) for an arbitrary  $q$ . The standard solutions  $X^{(s)}$  and  $Y^{(s)}$  are obtained from  $X^{(3)}$  and  $Y^{(3)}$  by setting

$$(12) \quad q = y_0^{(3)} / [x_1^{(3)} + y_1^{(3)}]$$

in (11). With this normalization

$$(13) \quad x_0^{(s)} = 1; \quad y_0^{(s)} = 0.$$

#### METHOD OF APPROXIMATING THE X AND Y FUNCTIONS

Dropping the parameters  $k$  and  $\tau$  for brevity, let

$$(14) \quad X_0(\mu) = 1; \quad Y_0(\mu) = \exp(-\tau/\mu);$$

$$(15) \quad X_1(\mu) = 1 - \mu T_1[X_0(\mu), Y_0(\mu)];$$

$$Y_1(\mu) = \exp(-\tau/\mu) + \mu T_2[X_0(\mu), Y_0(\mu)],$$

with  $T_1$  and  $T_2$  defined in (8) and (9).

Starting with  $X_0$  and  $Y_0$ , we may compute in sequence  $X_1, Y_1, X_2, Y_2, \dots, X_n, Y_n$ . When two successive approximations agree to a sufficient accuracy, the solutions  $X = X_n, Y = Y_n$  are considered satisfactory approximations to the solutions of (6) and (7).

In order to speed convergence, use can be made of (124RT) and (126KT). Thus if  $X_n, Y_n$  are available, an "improved" set is obtained by setting

$$(16) \quad X_{n+1} = X_n + \mu \Delta_n (1 - e^{-\tau/\mu}); \quad Y_{n+1} = Y_n + \mu \Delta_n (1 - e^{-\tau/\mu}),$$

where

$$(17) \quad \Delta_n = [1 - (x_{0,n} + y_{0,n}) - D_1] / D_2,$$

$$(18) \quad D_1 = [1 - 2 \int_0^1 \psi(t) dt] / [1 - x_{0,n} + y_{0,n}],$$

$$(19) \quad D_2 = 2 \int_0^1 t \psi(t) [1 - \exp(-\tau/t)] dt.$$

The symbols  $x_{0,n}$  and  $y_{0,n}$  imply the evaluation of these moments corresponding to  $X_n$  and  $Y_n$ . It can be readily verified that  $\Delta_n$  vanishes if  $X_n, Y_n$  are identical with  $X, Y$  respectively. Moreover, the moment relation (10) is satisfied identically for the set  $X_{n+1}, Y_{n+1}$ .

In Ref. 3 values of the  $X$  and  $Y$  functions are given for  $\tau = 0.15, 0.25$ , and  $1$ . An examination of the results shows that for  $\tau = 0.15$ ,  $X_2$  and  $Y_2$  agree with the more accurate values, based on several iterations, to within  $0.001$ , for small values of  $\mu$ , and often to four decimals for  $\mu > 0.4$ . It is expected that with decreasing  $\tau$ ,  $X_2$  and  $Y_2$  approximate  $X$  and  $Y$ , respectively, more and more closely. Consequently  $X_2$  and  $Y_2$  were taken as approximations to  $X$  and  $Y$  for the calculations given here.

It is possible to express  $X_1$  and  $Y_1$  in terms of the exponential integrals  $E_n(x)$  and elementary functions. Thus let

$$(20) \quad E_n(x) = \int_1^\infty e^{-xt} dt / t^n = \int_0^1 e^{-x/t} t^{n-2} dt$$

$$(21) \quad F_n(\tau, \mu) = \int_0^\tau e^{t/\mu} E_n(t) dt$$

$$(22) \quad G_{n,m}(\tau) = \int_0^1 t^{m-2} F_n(\tau, -t) dt$$

$$(23) \quad G'_{n,m}(\tau) = \int_0^1 e^{-\tau/t} t^{m-2} F_n(\tau, t) dt.$$

Further, let us now assign symbols to the coefficient of the polynomials  $\psi_k(t)$  entering into (8) and (9) by writing

$$(24) \quad \psi_k(t) = \sum_{m=0}^4 b_{k,m} t^m = \sum_{m=0}^4 a_m t^m.$$

For brevity the dependence of the coefficient  $a_m$  on  $k$  is not indicated. With the above definitions it can be verified that

$$(25) \quad X_1^{(k)}(\tau, \mu) = 1 + \sum_{j=0}^4 a_j F_{j+1}(\tau, -\mu)$$

$$(26) \quad Y_1^{(k)}(\tau, \mu) = e^{-\tau/\mu} [1 + \sum_{j=0}^4 a_j F_{j+1}(\tau, \mu)],$$

$k = 1, 2, 3, 4.$

The following recurrence relations can be readily established:

$$(27) \quad E_{n+1}(x) = [e^{-x} - x E_n(x)]/n, \quad n \geq 1.$$

$$(28) \quad F_n(\tau, \mu) = \mu [F_{n-1}(\tau, \mu) + e^{\tau/\mu} E_n(\tau) - \frac{1}{n-1}], \quad n \geq 2.$$

$$(29) \quad F_1(\tau, -\mu) = \mu [\log(1 + \frac{1}{\mu}) - e^{-\tau/\mu} E_1(\tau) + E_1(\frac{\tau}{\mu} + \tau)], \quad \mu > 0.$$

$$(30) \quad F_1(\tau, \mu) = \mu [-\log(\frac{1}{\mu} - 1) + e^{\tau/\mu} E_1(\tau) + Ei(\frac{\tau}{\mu} - \tau)],$$

$$(31) \quad F_1(\tau, 1) = \gamma + \log \tau + e^{\tau} E_1(\tau),$$

where  $\gamma = 0.5772156649$  (Euler's constant to ten decimals).

In (30)

$$(32) \quad Ei(x) = \int_{-\infty}^x (e^t/t) dt, \quad x = -\tau + \frac{\tau}{\mu},$$

is the well known exponential integral, and  $E_1(x)$ , defined in (20), is equal to  $-Ei(-x)$ . Both  $Ei(x)$  and  $E_1(x)$  have been extensively tabulated.

The moments  $\alpha_{j,1}$ ,  $\beta_{j,1}$  can be obtained by numerical integration, or else by the use of the functions  $G_{n,m}(\tau)$  and  $G'_{n,m}(\tau)$ . From the definition of these functions and (25), (26) we have

$$(33) \quad \alpha_{n,1}^{(k)}(\tau) = \frac{1}{n+1} + \sum_{j=0}^4 a_j G_{n+2,j+1}(\tau).$$

$$(34) \quad \beta_{n,1}^{(k)}(\tau) = E_{n+2}(\tau) + \sum_{j=0}^4 a_j G_{n+2,j+1}(\tau).$$

It has been shown by Chandrasekhar (Ref. 2), Appendix I, that

$$(35) \quad G_{n,m}(\tau) = \int_0^\tau E_n(t) E_m(t) dt = G_{m,n}$$

$$(36) \quad G'_{n,m}(\tau) = \int_0^\tau E_n(t) E_m(\tau-t) dt = G'_{m,n}$$

$$(37) \quad G_{n,m}(\tau) = \frac{1}{(m+n-1)} [\tau E_n(\tau) E_m(\tau) + F_n(\tau, -1) + F_m(\tau, -1)]$$

$$(38) \quad G'_{n,m}(\tau) = G'_{n-1,m+1}(\tau) - \frac{1}{n-1} E_{m+1}(\tau) + \frac{1}{m} E_m(\tau) \quad n \geq 2$$

$$(39) \quad G'_{1,1}(\tau) = 2 [E_1(\tau) + (\gamma + \log \tau) E_2(\tau) - U(\tau)],$$

where

$$(40) \quad U(\tau) = \frac{1}{2} \tau (\gamma + \log \tau)^2 + \frac{\pi^2 \tau}{12} + \sum_{m=1}^{\infty} \frac{\tau^{m+1} (-1)^m}{m^2 m!}$$

The moments of order zero and one were obtained from the above formulas, rather than from numerical integration, for all values of  $\tau$ . For  $\tau \geq 0.01$  higher order moments were obtained by numerical integration. All required moments for  $\tau = 0.001$  and  $0.003$  listed in these tables were obtained from the above formulas. The computation of the function  $G_{n,m}(\tau)$  from (37) is straightforward. The functions  $G'_{n,m}(\tau)$  are somewhat harder to get. In practice  $G'_{1,1}(\tau)$  was computed, and the additional functions specified below were derived. For convenience some abbreviations are also introduced, as explained.

# Abbreviations

$$f_n = e^{-\tau} F_n(\tau, 1); \quad G'_{i,j} = G'_{i,j}(\tau); \quad E_n = E_n(\tau)$$

$$(41) \quad G'_{1,2} = \frac{1}{2} [-\tau G'_{1,1} + \tau E_1 + f_1 + f_2]$$

$$(42) \quad G'_{1,j} = \frac{1}{j} [-\tau G'_{1,j-1} + \frac{\tau}{j-1} E_1 + f_1 + f_j] \quad j \geq 2$$

$$(43) \quad G'_{3,2} = G'_{1,4} - E_4 + \frac{1}{3} E_2$$

$$(44) \quad G'_{5,2} + G'_{1,6} - E_6 + \frac{1}{5} E_2$$

Once  $\alpha_{j,1}$  and  $\beta_{j,1}$  are available, the moments  $x_{n,1}$  and  $y_{n,1}$  can be obtained from

$$(45) \quad x_{n,1} = \sum_{j=0}^4 a_j \alpha_{n+j,1}; \quad y_{n,1} = \sum_{j=0}^4 a_j \beta_{n+j,1}$$

When  $X^{(k)}_1, Y^{(k)}_1$  and their moments are known,  $X^{(k)}_2$  and  $Y^{(k)}_2$  can be obtained from (16). It can be verified that

$$(46) \quad D_2 = a_0 + \frac{a_2}{2} + \frac{a_4}{3} - [2a_0 E_3 + 2a_2 E_5 + 2a_4 E_7].$$

The moments corresponding to the second approximation are obtained from

$$(47) \quad \alpha_{n,2} = \alpha_{n,1} + \Delta \left( \frac{1}{n+2} - E_{n+3} \right); \quad \beta_{n,2} = \beta_{n,1} + \Delta \left( \frac{1}{n+2} - E_{n+3} \right)$$

Values of  $x_{n,2}$  and  $y_{n,2}$  are then obtained by substituting (47) into (45).

To get the standard solution, (12) is used in conjunction with  $X^{(3)}_2, Y^{(3)}_2$  and the corresponding moments  $x_{1,2}, y_{1,2}$  and  $y_{0,2}$ .

## SCATTERING AND INTENSITY FUNCTIONS

The scattering and "intensity" functions depend on the coefficients listed in Table 4; they are based implicitly on the  $X$  and  $Y$  functions and their moments. It turned out that for small values of  $\tau$ , some of the coefficients are sensitive to a small change in the moments of Table 2. In view of the fact that the  $X$  and  $Y$  functions are approximated by  $X_2$  and  $Y_2$ , respectively, the approximations to  $X$  and  $Y$  are probably correct to no more than four decimal places. The functions have a logarithmic singularity in their derivatives at the origin of  $\mu$ , and straightforward numerical integration for the moments of order two is good to only five decimal places. It was expected that this accuracy would be ample, in view of the fact that  $X_2$  and  $Y_2$  are themselves correct representations of  $X$  and  $Y$  to at most that accuracy. At the outset all moments of order higher than one were obtained by numerical integration, and it turned out that some of the coefficients in Table 4 became indeterminate for  $\tau = 0.001$  and  $0.003$ . The required coefficients were then interpolated from a table of such coefficients. These interpolated coefficients were good to within  $\pm 0.003$ , and the scattering functions actually listed were based on them. It turned out that the "intensity" functions became meaningless when based on these scattering functions. The higher moments for  $\tau = 0.001$  and  $0.003$  were then recomputed by the formulas (33) and (34) and the coefficients listed in Table 4 are based on these recomputed values. Although they are probably correct to only three decimals, compared with those based on exact values of  $X$  and  $Y$ , it was possible to derive them from computations of the moments which were consistent among themselves to seven decimal places. Computations of the "intensity functions" based on the "corrected" scattering functions were made for a few parameters, and the results were consistent. We give below some comparative values:

|           | (a) Coefficients<br>on which scattering<br>functions are based |               | (b) More consistent<br>coefficients, given<br>in Table 4 |               |
|-----------|--|---------------|--|---------------|
|           | $\tau = .001$  | $\tau = .003$ | $\tau = .001$  | $\tau = .003$ |
| $v_1$     | -0.18820   | -0.18946      | -0.18847   | -0.18975      |
| $v_2$     | -0.18870   | -0.19095      | -0.18897   | -0.19123      |
| $v_3$     | +1.13551   | 1.11659       | 1.13257  | 1.11348       |
| $v_4$     | -1.51307   | -1.49888      | -1.51083   | -1.49651      |
| $s$       | -0.24957   | -0.24873      | -0.24936   | -0.24837      |
| $t$       | -0.49981   | -0.49943      | -0.49981   | -0.49944      |
| $u_3$     | -0.28202   | -0.28343      | -0.28229   | -0.28371      |
| $u_4$     | -0.28252   | -0.28492      | -0.28279   | -0.28520      |
| $u_5$     | 0.00037  | 0.00113       | 0.00038  | 0.00113       |
| $a$       | 0.49812  | 0.49452       | 0.49744  | 0.49354       |
| $b$       | 0.49877  | 0.49646       | 0.49853  | 0.49621       |
| $c$       | -0.37540   | -0.37779      | -0.37559   | -0.37632      |
| $g$       | 1.32144  | 1.30424       | 1.32145  | 1.30425       |
| $\bar{u}$ | 0.00062  | 0.00296       | 0.00100  | 0.00297       |

The following are the scattering functions based on coefficients of column (b), for  $\tau = 0.001$  for three values of  $\mu$ .

|               | $\tau = 0.001$ | $\mu = 0.1$ | $\mu = 0.6$ | $\mu = 1$ |
|---------------|----------------|-------------|-------------|-----------|
| $\psi$        |                | 0.01021     | 0.36115     | 1.00287   |
| $\xi$         |                | 0.01011     | 0.36055     | 1.00186   |
| $\varphi$     |                | 0.99490     | 0.64321     | 0.00010   |
| $\eta$        |                | 0.98503     | 0.64212     | 0.00012   |
| $\zeta$       |                | 0.00009     | 0.00009     | 0.00010   |
| $\theta$      |                | 0.00009     | 0.00009     | 0.00009   |
| $\chi$        |                | 1.00284     | 1.00285     | 1.00285   |
| $\sigma$      |                | 0.99289     | 1.00118     | 1.00185   |
| $\gamma_\ell$ |                | 0.99503     | 0.99918     | 0.99694   |
| $\gamma_r$    |                | 0.99503     | 0.99917     | 0.99950   |

Compared with the values tabulated,  $\eta$  diverges by most, especially for  $\mu = 1$ .

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It was not deemed worth while to recompute the scattering and intensity functions for  $\tau = 0.001$  and  $0.003$ , especially since the simple formula (4), given in the preceding Introduction, gives good results for small values of  $\tau$ . In the following schedule some comparative results are given.

A: Values computed from Chandrasekhar's formulas.

B: Values computed from formula (4), Z. Sekera's Introduction.

| $\tau$ | $\mu_0$ | $\mu$ | $I_r$   | $I_s$    | $I_a$    |   |
|--------|---------|-------|---------|----------|----------|---|
| 0.001  | 0.1     | 0.6   | 0.00031 | 0.00023  | 0.00017  | A |
|        |         |       | .00031  | .00023   | .00017   | B |
|        | 0.6     | 0.1   | 0.00187 | 0.00120  | 0.00118  | A |
|        |         |       | .00186  | .00137   | .00101   | B |
|        | 0.6     | 1.0   | 0.00019 | 0.000071 | 0.000071 | A |
|        |         |       | .000187 | .000067  | .000067  | B |
|        | 1.0     | 0.6   | 0.00031 | 0.00012  | 0.00012  | A |
|        |         |       | .000278 | .000111  | .000111  | B |
|        | 0.01    | 0.02  | 0.01772 | 0.01786  | 0.01648  | A |
|        |         |       | .01398  | .01389   | .01378   | B |
|        | 0.02    | 0.60  | 0.00307 | 0.00255  | 0.00139  | A |
|        |         |       | .00244  | .00209   | .00151   | B |
|        | 0.02    | 1.00  | 0.00185 | 0.00008  | 0.00008  | A |
|        |         |       | .00147  | .000006  | .000006  | B |
| 0.01   | 0.6     | 0.1   | 0.01804 | 0.01344  | 0.00999  | A |
|        |         |       | .01777  | .0130    | .00958   | B |
|        | 0.6     | 0.8   | 0.00235 | 0.00218  | 0.00001  | A |
|        |         |       | .00231  | .00213   | 0        | B |
|        | 0.6     | 1.0   | 0.00188 | 0.00068  | 0.00068  | A |
|        |         |       | .00185  | .00067   | .00067   | B |

There is a considerable loss in significant figures, in computing  $I_r$  and  $I_s$  by method A, and wherever one significant figure only is given, that figure is not trustworthy, and the value given by method B may in fact be the better one. The above schedule seems to indicate that Sekera's formula is good, even when  $\tau$  is as large as 0.01.



It should be emphasized that the entries given are all based implicitly on the second approximation to the X and Y functions, as stated previously, and it should not be inferred that the values are correct to all the decimal places given, compared with the true results based on exact values of X and Y. For  $\tau \geq 0.01$  the scattering and intensity functions are probably correct to three decimal places. This conjecture is based on comparisons made in (2) for  $\tau = 0.15$ , with similar computations.

Table 1. X and Y Functions

Values of  $X_n^{(k)}(\mu, \tau)$  and  $Y_n^{(k)}(\mu, \tau)$

$k = 1, 2, 3, 4$

for  $\tau = 0.001, 0.003, 0.01, 0.02, 0.05$ , and  $0.10$ .  $X_n^{(k)}(\mu, \tau)$  and  $Y_n^{(k)}$  are defined in the section on Numerical Analysis.

TABLE 1 X and Y Functions  
 $\tau = .001$ 

| $\mu$ | $X_2^{(1)}$ | $Y_2^{(1)}$ | $X_2^{(2)}$ | $Y_2^{(2)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 1000000     | 0000000     | 1000000     | 0000000     |
| 001   | 100263      | 090745      | 100153      | 090636      |
| 002   | 100269      | 095391      | 100157      | 095279      |
| 003   | 100271      | 095992      | 100158      | 095880      |
| 004   | 100272      | 097803      | 100159      | 097690      |
| 005   | 100273      | 093293      | 100159      | 098179      |
| 006   | 100273      | 093620      | 100159      | 098506      |
| 007   | 100274      | 093855      | 100160      | 098741      |
| 008   | 100274      | 093032      | 100160      | 098917      |
| 009   | 100274      | 093169      | 100160      | 099055      |
| 010   | 100274      | 093279      | 100160      | 099165      |
| 011   | 100274      | 093369      | 100160      | 099255      |
| 012   | 100274      | 093444      | 100160      | 099330      |
| 014   | 100275      | 093563      | 100160      | 099448      |
| 016   | 100275      | 093652      | 100160      | 099537      |
| 018   | 100275      | 093721      | 100160      | 099606      |
| 020   | 100275      | 093776      | 100160      | 099662      |
| 022   | 100275      | 093821      | 100160      | 099707      |
| 024   | 100275      | 093859      | 100160      | 099743      |
| 026   | 100275      | 093891      | 100160      | 099777      |
| 028   | 100275      | 093919      | 100160      | 099804      |
| 030   | 100275      | 093942      | 100160      | 099828      |
| 032   | 100275      | 093963      | 100161      | 099848      |
| 034   | 100275      | 093981      | 100161      | 099867      |
| 036   | 100275      | 093998      | 100161      | 099883      |
| 040   | 100275      | 100026      | 100161      | 099911      |
| 044   | 100275      | 100048      | 100161      | 099934      |
| 048   | 100275      | 100067      | 100161      | 099952      |
| 052   | 100275      | 100083      | 100161      | 099968      |
| 056   | 100275      | 100097      | 100161      | 099982      |
| 060   | 100275      | 100109      | 100161      | 099994      |
| 064   | 100275      | 100119      | 100161      | 100004      |
| 068   | 100275      | 100126      | 100161      | 100014      |
| 072   | 100275      | 100137      | 100161      | 100022      |
| 076   | 100275      | 100144      | 100161      | 100029      |
| 080   | 100275      | 100150      | 100161      | 100036      |
| 084   | 100275      | 100156      | 100161      | 100042      |
| 085   | 100275      | 100159      | 100161      | 100044      |
| 088   | 100275      | 100162      | 100161      | 100047      |
| 090   | 100275      | 100164      | 100161      | 100050      |
| 092   | 100275      | 100167      | 100161      | 100052      |
| 094   | 100275      | 100169      | 100161      | 100054      |
| 096   | 100275      | 100171      | 100161      | 100057      |
| 098   | 100275      | 100173      | 100161      | 100059      |
| 100   | 100275      | 100175      | 100161      | 100061      |



TABLE 1 X and Y Functions (Continued)

 $\tau = .003$ 

| $\mu$ | $x_2^1$ | $y_2^{(1)}$ | $x_2^{(2)}$ | $y_2^{(2)}$ |
|-------|---------|-------------|-------------|-------------|
| 000   | 1000000 | 0000000     | 1000000     | 0000000     |
| 001   | 100618  | 074685      | 100368      | 074443      |
| 002   | 100660  | 086723      | 100394      | 086461      |
| 003   | 100675  | 091153      | 100403      | 090884      |
| 004   | 100683  | 093453      | 100408      | 093180      |
| 005   | 100687  | 094861      | 100411      | 094585      |
| 006   | 100690  | 095811      | 100413      | 095534      |
| 007   | 100693  | 096495      | 100414      | 096218      |
| 008   | 100694  | 097012      | 100415      | 096733      |
| 009   | 100696  | 097416      | 100416      | 097136      |
| 010   | 100697  | 097740      | 100416      | 097460      |
| 011   | 100698  | 098006      | 100417      | 097726      |
| 012   | 100693  | 098228      | 100417      | 097948      |
| 014   | 100700  | 098578      | 100418      | 098297      |
| 016   | 100700  | 098842      | 100419      | 098561      |
| 018   | 100701  | 099047      | 100419      | 098766      |
| 020   | 100702  | 099212      | 100419      | 098930      |
| 022   | 100702  | 099347      | 100420      | 099065      |
| 024   | 100702  | 099460      | 100420      | 099177      |
| 026   | 100703  | 099555      | 100420      | 099272      |
| 028   | 100703  | 099637      | 100420      | 099354      |
| 030   | 100703  | 099708      | 100420      | 099425      |
| 032   | 100703  | 099770      | 100420      | 099487      |
| 034   | 100704  | 099825      | 100421      | 099542      |
| 036   | 100704  | 099873      | 100421      | 099591      |
| 040   | 100704  | 099956      | 100421      | 099673      |
| 044   | 100704  | 100024      | 100421      | 099741      |
| 048   | 100704  | 100081      | 100421      | 099798      |
| 052   | 100705  | 100129      | 100421      | 099846      |
| 056   | 100705  | 100170      | 100421      | 099887      |
| 060   | 100705  | 100206      | 100421      | 099922      |
| 064   | 100705  | 100237      | 100421      | 099954      |
| 068   | 100705  | 100265      | 100421      | 099981      |
| 072   | 100705  | 100289      | 100421      | 100006      |
| 076   | 100705  | 100311      | 100421      | 100027      |
| 080   | 100705  | 100331      | 100422      | 100047      |
| 084   | 100705  | 100349      | 100422      | 100065      |
| 086   | 100705  | 100357      | 100422      | 100073      |
| 088   | 100705  | 100365      | 100422      | 100081      |
| 090   | 100705  | 100372      | 100422      | 100089      |
| 092   | 100705  | 100380      | 100422      | 100096      |
| 094   | 100705  | 100387      | 100422      | 100103      |
| 096   | 100705  | 100393      | 100422      | 100110      |
| 098   | 100706  | 100400      | 100422      | 100116      |
| 100   | 100706  | 100406      | 100422      | 100122      |

TABLE 1  $X$  and  $Y$  Functions

$\tau = .003$

| $\mu$ | $X_2^{(s)}$ | $Y_2^{(s)}$ | $X_2^{(4)}$ | $Y_2^{(4)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 1000000     | 0000000     | 1000000     | 0000000     |
| 001   | 103446      | 072898      | 100569      | 074636      |
| 002   | 106141      | 082362      | 100607      | 086670      |
| 003   | 108802      | 084174      | 100621      | 091100      |
| 004   | 111454      | 083843      | 100628      | 093398      |
| 005   | 114102      | 082615      | 100632      | 094806      |
| 006   | 116749      | 080928      | 100635      | 095755      |
| 007   | 119394      | 078973      | 100637      | 096440      |
| 008   | 122039      | 076850      | 100639      | 096956      |
| 009   | 124683      | 074613      | 100640      | 097360      |
| 010   | 127327      | 072297      | 100641      | 097684      |
| 011   | 129971      | 069921      | 100642      | 097950      |
| 012   | 132615      | 067502      | 100643      | 098172      |
| 014   | 137901      | 062569      | 100644      | 098522      |
| 016   | 143188      | 057549      | 100644      | 098786      |
| 018   | 148474      | 052470      | 100645      | 098991      |
| 020   | 153760      | 047350      | 100645      | 099156      |
| 022   | 159046      | 042200      | 100646      | 099291      |
| 024   | 164331      | 037028      | 100646      | 099403      |
| 026   | 169617      | 031839      | 100646      | 099499      |
| 028   | 174903      | 026636      | 100647      | 099580      |
| 030   | 180188      | 021422      | 100647      | 099651      |
| 032   | 185474      | 016199      | 100647      | 099713      |
| 034   | 190759      | 010969      | 100647      | 099768      |
| 036   | 196045      | 005733      | 100647      | 099817      |
| 040   | 206616      | -004754     | 100648      | 099900      |
| 044   | 217187      | -015256     | 100648      | 099968      |
| 048   | 227758      | -025770     | 100648      | 100025      |
| 052   | 238328      | -036292     | 100648      | 100073      |
| 056   | 248899      | -046821     | 100648      | 100114      |
| 060   | 259470      | -057356     | 100648      | 100149      |
| 064   | 270041      | -067895     | 100649      | 100181      |
| 068   | 280611      | -078438     | 100649      | 100208      |
| 072   | 291182      | -088984     | 100649      | 100233      |
| 076   | 301753      | -099533     | 100649      | 100255      |
| 080   | 312323      | -110084     | 100649      | 100274      |
| 084   | 322894      | -120636     | 100649      | 100292      |
| 086   | 328179      | -125913     | 100649      | 100300      |
| 088   | 333465      | -131190     | 100649      | 100308      |
| 090   | 338750      | -136468     | 100649      | 100316      |
| 092   | 344036      | -141746     | 100649      | 100323      |
| 094   | 349321      | -147024     | 100649      | 100330      |
| 096   | 354606      | -152303     | 100649      | 100337      |
| 098   | 359892      | -157582     | 100649      | 100343      |
| 100   | 365177      | -162861     | 100649      | 100349      |

TABLE 1 X and Y Functions (Continued)

 $\tau = .010$ 

| $\mu$ | $x_2^{(1)}$ | $y_2^{(1)}$ | $x_2^{(2)}$ | $y_2^{(2)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 1000000     | 0000000     | 1000000     | 0000000     |
| 001   | 101279      | 037950      | 100783      | 037513      |
| 002   | 101553      | 062133      | 100956      | 061572      |
| 003   | 101665      | 073265      | 101026      | 072652      |
| 004   | 101725      | 079564      | 101064      | 078923      |
| 005   | 101763      | 083602      | 101088      | 082944      |
| 006   | 101789      | 086408      | 101104      | 085738      |
| 007   | 101808      | 088470      | 101116      | 087791      |
| 008   | 101822      | 090049      | 101125      | 089363      |
| 009   | 101833      | 091297      | 101132      | 090606      |
| 010   | 101842      | 092308      | 101137      | 091612      |
| 011   | 101849      | 093143      | 101142      | 092444      |
| 012   | 101856      | 093845      | 101146      | 093143      |
| 014   | 101866      | 094959      | 101152      | 094252      |
| 016   | 101873      | 095803      | 101157      | 095093      |
| 018   | 101879      | 096465      | 101161      | 095751      |
| 020   | 101883      | 096997      | 101164      | 096282      |
| 022   | 101887      | 097435      | 101166      | 096718      |
| 024   | 101891      | 097802      | 101168      | 097083      |
| 026   | 101893      | 098113      | 101170      | 097393      |
| 028   | 101896      | 098381      | 101171      | 097659      |
| 030   | 101898      | 098613      | 101172      | 097891      |
| 032   | 101899      | 098817      | 101174      | 098094      |
| 034   | 101901      | 098997      | 101175      | 098273      |
| 036   | 101902      | 099158      | 101175      | 098433      |
| 040   | 101905      | 099431      | 101177      | 098706      |
| 044   | 101907      | 099655      | 101178      | 098929      |
| 048   | 101908      | 099843      | 101179      | 099115      |
| 052   | 101910      | 100001      | 101180      | 099274      |
| 056   | 101911      | 100138      | 101181      | 099409      |
| 060   | 101912      | 100256      | 101181      | 099527      |
| 064   | 101913      | 100359      | 101182      | 099630      |
| 068   | 101914      | 100451      | 101183      | 099721      |
| 072   | 101914      | 100532      | 101183      | 099802      |
| 076   | 101915      | 100605      | 101183      | 099875      |
| 080   | 101915      | 100671      | 101184      | 099940      |
| 084   | 101916      | 100730      | 101184      | 100000      |
| 086   | 101916      | 100758      | 101184      | 100027      |
| 088   | 101916      | 100784      | 101184      | 100053      |
| 090   | 101917      | 100810      | 101184      | 100078      |
| 092   | 101917      | 100834      | 101185      | 100103      |
| 094   | 101917      | 100857      | 101185      | 100126      |
| 096   | 101917      | 100879      | 101185      | 100148      |
| 098   | 101917      | 100900      | 101185      | 100169      |
| 100   | 101918      | 100921      | 101185      | 100189      |

TABLE 1 X and Y Functions (Continued)

 $\tau = .010$ 

| $\mu$ | $x_2^S$ | $y_2^S$ | $x_2^4$ | $y_2^4$ |
|-------|---------|---------|---------|---------|
| 000   | 1000000 | 0000000 | 1000000 | 0000000 |
| 001   | 104138  | 037133  | 101157  | 037829  |
| 002   | 107047  | 059176  | 101402  | 061982  |
| 003   | 109777  | 067893  | 101501  | 073102  |
| 004   | 112451  | 071688  | 101555  | 079394  |
| 005   | 115101  | 073183  | 101589  | 083428  |
| 006   | 117738  | 073425  | 101612  | 086231  |
| 007   | 120367  | 072912  | 101628  | 088291  |
| 008   | 122992  | 071907  | 101641  | 089869  |
| 009   | 125613  | 070565  | 101651  | 091115  |
| 010   | 128232  | 068983  | 101659  | 092125  |
| 011   | 130849  | 067222  | 101666  | 092960  |
| 012   | 133465  | 065326  | 101671  | 093661  |
| 014   | 138693  | 061239  | 101680  | 094773  |
| 016   | 143920  | 056878  | 101687  | 095617  |
| 018   | 149144  | 052332  | 101692  | 096278  |
| 020   | 154367  | 047655  | 101696  | 096810  |
| 022   | 159590  | 042881  | 101699  | 097247  |
| 024   | 164811  | 038035  | 101702  | 097614  |
| 026   | 170032  | 033133  | 101705  | 097925  |
| 028   | 175253  | 028187  | 101707  | 098192  |
| 030   | 180473  | 023204  | 101709  | 098424  |
| 032   | 185693  | 018193  | 101710  | 098628  |
| 034   | 190913  | 013158  | 101712  | 098808  |
| 036   | 196133  | 008103  | 101713  | 098968  |
| 040   | 206572  | -002055 | 101715  | 099241  |
| 044   | 217010  | -012263 | 101717  | 099465  |
| 048   | 227448  | -022509 | 101718  | 099652  |
| 052   | 237886  | -032785 | 101719  | 099811  |
| 056   | 248324  | -043082 | 101720  | 099947  |
| 060   | 258761  | -053399 | 101721  | 100065  |
| 064   | 269198  | -063730 | 101722  | 100169  |
| 068   | 279635  | -074073 | 101723  | 100260  |
| 072   | 290072  | -084427 | 101723  | 100312  |
| 076   | 300509  | -094789 | 101724  | 100414  |
| 080   | 310946  | -105159 | 101724  | 100480  |
| 084   | 321383  | -115535 | 101725  | 100539  |
| 086   | 326602  | -120725 | 101725  | 100567  |
| 088   | 331820  | -125916 | 101725  | 100593  |
| 090   | 337038  | -131109 | 101726  | 100618  |
| 092   | 342257  | -136303 | 101726  | 100643  |
| 094   | 347475  | -141497 | 101726  | 100666  |
| 096   | 352694  | -146693 | 101726  | 100688  |
| 098   | 357912  | -151889 | 101726  | 100709  |
| 100   | 363130  | -157087 | 101726  | 100729  |



TABLE 1 X and Y Functions (Continued)

 $\tau = .02$ 

| $\mu$ | $x_2^{(1)}$ | $y_2^{(1)}$ | $x_2^{(2)}$ | $y_2^{(2)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 100000      | 000000      | 100000      | 000000      |
| 001   | 101625      | 014852      | 101003      | 014382      |
| 002   | 102250      | 038806      | 101403      | 038074      |
| 003   | 102550      | 053713      | 101596      | 052847      |
| 004   | 102724      | 063232      | 101708      | 062288      |
| 005   | 102837      | 069748      | 101781      | 068752      |
| 006   | 102916      | 074466      | 101832      | 073433      |
| 007   | 102975      | 078033      | 101870      | 076972      |
| 008   | 103020      | 080821      | 101899      | 079739      |
| 009   | 103056      | 083059      | 101922      | 081960      |
| 010   | 103085      | 084895      | 101941      | 083782      |
| 011   | 103109      | 086427      | 101956      | 085302      |
| 012   | 103129      | 087725      | 101969      | 086591      |
| 014   | 103162      | 089806      | 101990      | 088656      |
| 016   | 103186      | 091399      | 102006      | 090237      |
| 018   | 103205      | 092658      | 102018      | 091486      |
| 020   | 103221      | 093678      | 102028      | 092499      |
| 022   | 103234      | 094521      | 102037      | 093335      |
| 024   | 103244      | 095229      | 102044      | 094038      |
| 026   | 103254      | 095833      | 102049      | 094637      |
| 028   | 103261      | 096354      | 102054      | 095154      |
| 030   | 103268      | 096808      | 102059      | 095605      |
| 032   | 103274      | 097207      | 102063      | 096000      |
| 034   | 103280      | 097560      | 102066      | 096351      |
| 036   | 103284      | 097876      | 102069      | 096664      |
| 040   | 103292      | 098415      | 102074      | 097199      |
| 044   | 103299      | 098858      | 102079      | 097639      |
| 048   | 103304      | 099229      | 102082      | 098008      |
| 052   | 103309      | 099545      | 102085      | 098321      |
| 056   | 103313      | 099816      | 102088      | 098592      |
| 060   | 103317      | 100052      | 102090      | 098827      |
| 064   | 103320      | 100258      | 102092      | 099034      |
| 068   | 103322      | 100441      | 102094      | 099218      |
| 072   | 103325      | 100602      | 102095      | 099383      |
| 076   | 103327      | 100747      | 102097      | 099531      |
| 080   | 103329      | 100876      | 102098      | 099666      |
| 084   | 103331      | 100992      | 102099      | 099789      |
| 086   | 103331      | 101046      | 102100      | 099847      |
| 088   | 103332      | 101096      | 102100      | 099903      |
| 090   | 103333      | 101144      | 102101      | 099956      |
| 092   | 103334      | 101190      | 102101      | 100007      |
| 094   | 103334      | 101233      | 102102      | 100057      |
| 096   | 103335      | 101274      | 102102      | 100105      |
| 098   | 103336      | 101312      | 102102      | 100151      |
| 100   | 103336      | 101349      | 102103      | 100196      |

TABLE 1 X and Y Functions (Continued)

 $\tau = .020$ 

| $\mu$ | $x_2^{(s)}$ | $y_2^{(s)}$ | $x_2^4$ | $y_2^4$ |
|-------|-------------|-------------|---------|---------|
| 000   | 1000000     | 0000000     | 1000000 | 0000000 |
| 001   | 104441      | 014483      | 101457  | 014687  |
| 002   | 107643      | 036956      | 102006  | 038564  |
| 003   | 110514      | 049832      | 102264  | 053433  |
| 004   | 113259      | 057096      | 102421  | 062930  |
| 005   | 115944      | 061247      | 102519  | 069432  |
| 006   | 118596      | 063537      | 102589  | 074140  |
| 007   | 121229      | 064639      | 102640  | 077699  |
| 008   | 123848      | 064937      | 102679  | 080481  |
| 009   | 126458      | 064667      | 102711  | 082714  |
| 010   | 129061      | 063982      | 102736  | 084546  |
| 011   | 131660      | 062985      | 102757  | 086075  |
| 012   | 134255      | 061747      | 102775  | 087371  |
| 014   | 139437      | 058738      | 102803  | 089447  |
| 016   | 144611      | 055227      | 102824  | 091037  |
| 018   | 149780      | 051373      | 102841  | 092293  |
| 020   | 154946      | 047272      | 102855  | 093311  |
| 022   | 160109      | 042989      | 102866  | 094152  |
| 024   | 165271      | 038567      | 102875  | 094859  |
| 026   | 170430      | 034037      | 102883  | 095462  |
| 028   | 175589      | 029422      | 102890  | 095981  |
| 030   | 180746      | 024738      | 102896  | 096434  |
| 032   | 185903      | 019998      | 102901  | 096832  |
| 034   | 191059      | 015210      | 102906  | 097184  |
| 036   | 196215      | 010384      | 102910  | 097498  |
| 040   | 206525      | 000636      | 102917  | 098035  |
| 044   | 216834      | -009210     | 102923  | 098477  |
| 048   | 227141      | -019131     | 102928  | 098846  |
| 052   | 237448      | -029110     | 102932  | 099160  |
| 056   | 247753      | -039134     | 102935  | 099429  |
| 060   | 258058      | -049195     | 102938  | 099663  |
| 064   | 268362      | -059285     | 102941  | 099868  |
| 068   | 278666      | -069400     | 102943  | 100048  |
| 072   | 288968      | -079535     | 102945  | 100209  |
| 076   | 299270      | -089688     | 102947  | 100353  |
| 080   | 309571      | -099855     | 102949  | 100482  |
| 084   | 319870      | -110035     | 102950  | 100599  |
| 086   | 325020      | -115128     | 102951  | 100653  |
| 088   | 330169      | -120225     | 102952  | 100704  |
| 090   | 335318      | -125323     | 102953  | 100753  |
| 092   | 340466      | -130424     | 102953  | 100800  |
| 094   | 345614      | -135526     | 102954  | 100845  |
| 096   | 350762      | -140631     | 102954  | 100888  |
| 098   | 355910      | -145737     | 102955  | 100929  |
| 100   | 361057      | -150844     | 102955  | 100968  |

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TABLE 1 X and Y Functions (Continued)

$\tau = .05$

| $\mu$ | $x_2^{(1)}$ | $y_2^{(1)}$ | $x_2^{(2)}$ | $y_2^{(2)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 100000      | 000000      | 100000      | 000000      |
| 001   | 101825      | 001782      | 101134      | 001439      |
| 002   | 102998      | 010421      | 101906      | 009709      |
| 003   | 103779      | 021942      | 102426      | 020941      |
| 004   | 104315      | 032318      | 102785      | 031102      |
| 005   | 104700      | 040910      | 103044      | 039535      |
| 006   | 104989      | 047930      | 103239      | 046431      |
| 007   | 105213      | 053698      | 103390      | 052102      |
| 008   | 105392      | 058490      | 103511      | 056816      |
| 009   | 105537      | 062520      | 103609      | 060782      |
| 010   | 105658      | 065948      | 103691      | 064157      |
| 011   | 105760      | 068897      | 103760      | 067060      |
| 012   | 105847      | 071457      | 103819      | 069581      |
| 014   | 105988      | 075678      | 103914      | 073739      |
| 016   | 106098      | 079011      | 103988      | 077022      |
| 018   | 106185      | 081707      | 104047      | 079678      |
| 020   | 106256      | 083931      | 104095      | 081870      |
| 022   | 106315      | 085797      | 104135      | 083709      |
| 024   | 106365      | 087384      | 104169      | 085273      |
| 026   | 106407      | 088751      | 104198      | 086620      |
| 028   | 106444      | 089939      | 104223      | 087791      |
| 030   | 106476      | 090982      | 104245      | 088820      |
| 032   | 106505      | 091905      | 104264      | 089730      |
| 034   | 106530      | 092728      | 104281      | 090540      |
| 036   | 106552      | 093465      | 104296      | 091267      |
| 040   | 106591      | 094732      | 104323      | 092516      |
| 044   | 106623      | 095781      | 104344      | 093551      |
| 048   | 106649      | 096665      | 104362      | 094422      |
| 052   | 106672      | 097419      | 104378      | 095166      |
| 056   | 106691      | 098071      | 104391      | 095808      |
| 060   | 106708      | 098639      | 104402      | 096369      |
| 064   | 106723      | 099139      | 104412      | 096861      |
| 068   | 106737      | 099582      | 104421      | 097298      |
| 072   | 106748      | 099977      | 104429      | 097688      |
| 076   | 106759      | 100333      | 104436      | 098039      |
| 080   | 106768      | 100654      | 104443      | 098355      |
| 084   | 106777      | 100945      | 104449      | 098643      |
| 086   | 106781      | 101081      | 104452      | 098776      |
| 088   | 106785      | 101210      | 104454      | 098904      |
| 090   | 106789      | 101334      | 104457      | 099027      |
| 092   | 106792      | 101453      | 104459      | 099144      |
| 094   | 106795      | 101567      | 104461      | 099256      |
| 096   | 106799      | 101677      | 104463      | 099364      |
| 098   | 106802      | 101782      | 104466      | 099468      |
| 100   | 106805      | 101883      | 104468      | 099567      |

TABLE 1 X and Y Functions (Continued)

 $\tau = .050$ 

| $\mu$ | $x_2^s$ | $y_2^s$ | $x_2^4$ | $y_2^4$ |
|-------|---------|---------|---------|---------|
| 000   | 1000000 | 0000000 | 1000000 | 0000000 |
| 001   | 104604  | 000530  | 101647  | 000669  |
| 002   | 108277  | 001797  | 102781  | 002089  |
| 003   | 111629  | 005174  | 103689  | 005763  |
| 004   | 114772  | 009968  | 104416  | 011128  |
| 005   | 117767  | 015068  | 105001  | 017088  |
| 006   | 120653  | 019854  | 105478  | 022987  |
| 007   | 123459  | 024076  | 105871  | 028532  |
| 008   | 126204  | 027671  | 106199  | 033619  |
| 009   | 128903  | 030658  | 106478  | 038234  |
| 010   | 131565  | 033089  | 106716  | 042405  |
| 011   | 134197  | 035023  | 106922  | 046170  |
| 012   | 136806  | 036522  | 107102  | 049575  |
| 014   | 141968  | 038419  | 107500  | 055461  |
| 016   | 147075  | 039138  | 107638  | 060350  |
| 018   | 152143  | 038947  | 107832  | 064459  |
| 020   | 157182  | 038042  | 107992  | 067954  |
| 022   | 162198  | 036570  | 108128  | 070960  |
| 024   | 167197  | 034642  | 108243  | 073568  |
| 026   | 172182  | 032341  | 108343  | 075853  |
| 028   | 177156  | 029732  | 108430  | 077869  |
| 030   | 182121  | 026867  | 108507  | 079661  |
| 032   | 187078  | 023786  | 108575  | 081264  |
| 034   | 192028  | 020521  | 108636  | 082706  |
| 036   | 196974  | 017099  | 108690  | 084010  |
| 040   | 206851  | 009865  | 108784  | 086275  |
| 044   | 216714  | 002216  | 108862  | 088174  |
| 048   | 226567  | -005754 | 108928  | 089790  |
| 052   | 236411  | -013979 | 108984  | 091181  |
| 056   | 246249  | -022410 | 109033  | 092391  |
| 060   | 256081  | -031009 | 109075  | 093453  |
| 064   | 265909  | -039745 | 109113  | 094393  |
| 068   | 275733  | -048598 | 109146  | 095230  |
| 072   | 285554  | -057548 | 109176  | 095980  |
| 076   | 295373  | -066582 | 109203  | 096656  |
| 080   | 305189  | -075688 | 109227  | 097269  |
| 084   | 315003  | -084855 | 109249  | 097827  |
| 086   | 319910  | -089459 | 109259  | 098088  |
| 088   | 324816  | -094076 | 109269  | 098338  |
| 090   | 329722  | -098705 | 109278  | 098577  |
| 092   | 334627  | -103345 | 109287  | 098806  |
| 094   | 339532  | -107995 | 109296  | 099026  |
| 096   | 344437  | -112655 | 109304  | 099237  |
| 098   | 349342  | -117325 | 109312  | 099440  |
| 100   | 354246  | -122003 | 109319  | 099635  |

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TABLE 1 X and Y Functions (Continued)

 $\tau = .100$ 

| $\mu$ | $x_2^S$ | $y_2^S$ | $x_2^4$ | $y_2^4$ |
|-------|---------|---------|---------|---------|
| 000   | 100000  | 000000  | 100000  | 000000  |
| 001   | 104591  | 001497  | 101618  | 001589  |
| 002   | 108186  | 009607  | 102620  | 010058  |
| 003   | 111380  | 020066  | 103281  | 021459  |
| 004   | 114349  | 028965  | 103733  | 031749  |
| 005   | 117186  | 035806  | 104057  | 040279  |
| 006   | 119940  | 040892  | 104300  | 047251  |
| 007   | 122638  | 044601  | 104488  | 052982  |
| 008   | 125298  | 047244  | 104638  | 057744  |
| 009   | 127929  | 049060  | 104760  | 061750  |
| 010   | 130541  | 050226  | 104861  | 065158  |
| 011   | 133136  | 050872  | 104947  | 068090  |
| 012   | 135719  | 051101  | 105020  | 070635  |
| 014   | 140858  | 050592  | 105138  | 074833  |
| 016   | 145970  | 049128  | 105230  | 078148  |
| 018   | 151064  | 046983  | 105302  | 080829  |
| 020   | 156145  | 044332  | 105362  | 083041  |
| 022   | 161216  | 041299  | 105411  | 084897  |
| 024   | 166279  | 037967  | 105453  | 086476  |
| 026   | 171337  | 034400  | 105488  | 087835  |
| 028   | 176389  | 030643  | 105519  | 089017  |
| 030   | 181438  | 026731  | 105546  | 090055  |
| 032   | 186484  | 022691  | 105570  | 090973  |
| 034   | 191527  | 018544  | 105591  | 091791  |
| 036   | 196568  | 014306  | 105610  | 092525  |
| 040   | 206645  | 005608  | 105642  | 093785  |
| 044   | 216716  | -003319 | 105669  | 094829  |
| 048   | 226783  | -012425 | 105691  | 095709  |
| 052   | 236846  | -021668 | 105710  | 096459  |
| 056   | 246907  | -03102  | 105726  | 097107  |
| 060   | 256966  | -040462 | 105740  | 097672  |
| 064   | 267023  | -049976 | 105753  | 098170  |
| 068   | 277079  | -059550 | 105764  | 098610  |
| 072   | 287134  | -069174 | 105774  | 099004  |
| 076   | 297188  | -078842 | 105783  | 099358  |
| 080   | 307241  | -088546 | 105791  | 099677  |
| 084   | 317293  | -098282 | 105798  | 099967  |
| 086   | 322319  | -103160 | 105801  | 100102  |
| 088   | 327344  | -108045 | 105804  | 100231  |
| 090   | 332370  | -112936 | 105807  | 100354  |
| 092   | 337395  | -117832 | 105810  | 100473  |
| 094   | 342421  | -122733 | 105813  | 100586  |
| 096   | 347446  | -127640 | 105816  | 100695  |
| 098   | 352471  | -132551 | 105818  | 100799  |
| 100   | 357496  | -137466 | 105821  | 100900  |

TABLE 1 X and Y Functions

 $\tau = .100$ 

| $\mu$ | $x_2^{(1)}$ | $y_2^{(1)}$ | $x_2^{(2)}$ | $y_2^{(2)}$ |
|-------|-------------|-------------|-------------|-------------|
| 000   | 1000000     | 0000000     | 1000000     | 0000000     |
| 001   | 101872      | 000862      | 101161      | 000632      |
| 002   | 103220      | 002480      | 102052      | 001978      |
| 003   | 104319      | 006340      | 102796      | 005545      |
| 004   | 105209      | 011866      | 103406      | 010793      |
| 005   | 105929      | 017962      | 103904      | 016643      |
| 006   | 106517      | 023976      | 104313      | 022443      |
| 007   | 107004      | 029617      | 104651      | 027900      |
| 008   | 107411      | 034785      | 104936      | 032910      |
| 009   | 107757      | 039470      | 105177      | 037458      |
| 010   | 108053      | 043701      | 105385      | 041569      |
| 011   | 108309      | 047519      | 105564      | 045282      |
| 012   | 108533      | 050970      | 105722      | 048639      |
| 014   | 108905      | 056933      | 105983      | 054446      |
| 015   | 109202      | 061883      | 106191      | 059270      |
| 018   | 109444      | 066043      | 106361      | 063326      |
| 020   | 109644      | 069581      | 106503      | 066776      |
| 022   | 109813      | 072621      | 106622      | 069742      |
| 024   | 109958      | 075261      | 106723      | 072318      |
| 026   | 110083      | 077572      | 106811      | 074574      |
| 028   | 110191      | 079611      | 106888      | 076565      |
| 030   | 110287      | 081423      | 106956      | 078335      |
| 032   | 110372      | 083044      | 107016      | 079918      |
| 034   | 110448      | 084502      | 107069      | 081342      |
| 036   | 110517      | 085820      | 107118      | 082629      |
| 040   | 110634      | 088110      | 107200      | 084866      |
| 044   | 110732      | 090031      | 107269      | 086743      |
| 048   | 110814      | 091664      | 107328      | 088339      |
| 052   | 110885      | 093070      | 107377      | 089713      |
| 056   | 110946      | 094293      | 107420      | 090908      |
| 060   | 110999      | 095367      | 107458      | 091958      |
| 064   | 111046      | 096316      | 107491      | 092886      |
| 068   | 111087      | 097162      | 107521      | 093713      |
| 072   | 111125      | 097920      | 107547      | 094454      |
| 076   | 111158      | 098604      | 107571      | 095122      |
| 080   | 111188      | 099223      | 107592      | 095728      |
| 084   | 111216      | 099787      | 107611      | 096279      |
| 086   | 111229      | 100051      | 107620      | 096537      |
| 088   | 111241      | 100303      | 107629      | 096783      |
| 090   | 111253      | 100544      | 107637      | 097019      |
| 092   | 111264      | 100776      | 107645      | 097246      |
| 094   | 111275      | 100998      | 107653      | 097463      |
| 096   | 111285      | 101212      | 107660      | 097672      |
| 098   | 111295      | 101417      | 107667      | 097873      |
| 100   | 111304      | 101614      | 107674      | 098066      |

Table 2. Moments

$$\alpha_p^{(k)} = \int_0^1 x_2^{(k)}(t, \tau) t^p dt \quad ; \quad \beta_p^{(k)} = \int_0^1 y_2^{(k)}(t, \tau) t^p dt$$

$$x_p^{(k)} = \int_0^1 \psi_k(t) x_2^{(k)}(t, \tau) t^p dt \quad ; \quad y_p^{(k)} = \int_0^1 \psi_k(t) y_2^{(k)}(t, \tau) t^p dt$$

$$(k = 1, 2, 3, 4)$$

TABLE 2 Moments

| k | $\tau$ | $\alpha_0^{(k)}$ | $\alpha_1^{(k)}$ | $\alpha_2^{(k)}$ | $\alpha_3^{(k)}$ |
|---|--------|------------------|------------------|------------------|------------------|
| 1 | 001    | 100274           | 050137           | 033425           | 025068           |
| 1 | 003    | 100699           | 050352           | 033568           | 025176           |
| 1 | 010    | 101877           | 050954           | 033971           | 025478           |
| 1 | 020    | 103219           | 051654           | 034440           | 025831           |
| 1 | 050    | 106348           | 053336           | 035578           | 026689           |
| 1 | 100    | 110120           | 055452           | 037027           | 027788           |
|   |        |                  |                  |                  |                  |
| 2 | 001    | 100160           | 050080           | 033387           | 025040           |
| 2 | 003    | 100418           | 050210           | 033473           | 025105           |
| 2 | 010    | 101160           | 050590           | 033727           | 025295           |
| 2 | 020    | 102027           | 051042           | 034031           | 025524           |
| 2 | 050    | 104160           | 052189           | 034806           | 026108           |
| 2 | 100    | 106843           | 053696           | 035839           | 026891           |
|   |        |                  |                  |                  |                  |
| s | 001    | 233207           | 138742           | 099874           | 078226           |
| s | 003    | 233036           | 138543           | 099703           | 078080           |
| s | 010    | 232633           | 138076           | 099299           | 077736           |
| s | 020    | 232252           | 137638           | 098919           | 077410           |
| s | 050    | 231552           | 136839           | 098218           | 076807           |
| s | 100    | 230957           | 136169           | 097623           | 076291           |
|   |        |                  |                  |                  |                  |
| 4 | 001    | 100256           | 050128           | 033419           | 025064           |
| 4 | 003    | 100643           | 050324           | 033549           | 025162           |
| 4 | 010    | 101691           | 050859           | 033907           | 025431           |
| 4 | 020    | 102853           | 051465           | 034314           | 025736           |
| 4 | 050    | 105438           | 052855           | 035254           | 026445           |
| 4 | 100    | 108368           | 054499           | 036380           | 027299           |



TABLE 2 Moments (Continued)

| k | $\tau$ | $\alpha_4$ | $\alpha_5$ | $\alpha_6$ | $\alpha_7$ |
|---|--------|------------|------------|------------|------------|
| 1 | 001    | 020055     | 016712     | 014325     | 012534     |
| 1 | 003    | 020141     | 016784     | 014386     | 012588     |
| 1 | 010    | 020383     | 016986     | 014559     | 012739     |
| 1 | 020    | 020665     | 017221     | 014761     | 012916     |
| 1 | 050    | 021353     | 017796     | 015254     | 013348     |
| 1 | 100    | 022238     | 018535     | 015889     | 013904     |
|   |        |            |            |            |            |
| 2 | 001    | 020032     | 016693     | 014308     | 012520     |
| 2 | 003    | 020084     | 016737     | 014346     | 012552     |
| 2 | 010    | 020236     | 016864     | 014454     | 012648     |
| 2 | 020    | 020419     | 017016     | 014585     | 012762     |
| 2 | 050    | 020888     | 017408     | 014921     | 013056     |
| 2 | 100    | 021518     | 017934     | 015374     | 013453     |
|   |        |            |            |            |            |
| s | 001    | 064352     | 054680     | 047547     | 042064     |
| s | 003    | 064226     | 054570     | 047449     | 041976     |
| s | 010    | 063928     | 054309     | 047216     | 041767     |
| s | 020    | 063646     | 054060     | 046994     | 041567     |
| s | 050    | 063122     | 053599     | 046583     | 041197     |
| s | 100    | 062670     | 053199     | 046226     | 040873     |
|   |        |            |            |            |            |
| 4 | 001    | 020051     | 016709     | 014322     | 012532     |
| 4 | 003    | 020129     | 016774     | 014378     | 012581     |
| 4 | 010    | 020344     | 016954     | 014532     | 012715     |
| 4 | 020    | 020589     | 017158     | 014707     | 012869     |
| 4 | 050    | 021158     | 017632     | 015114     | 013225     |
| 4 | 100    | 021845     | 018207     | 015608     | 013658     |

TABLE 2 Moments (Continued)

| k | $\tau$ | $\beta_0$ | $\beta_1$ | $\beta_2$ | $\beta_3$ |
|---|--------|-----------|-----------|-----------|-----------|
| 1 | 001    | 099541    | 050038    | 033375    | 025035    |
| 1 | 003    | 098829    | 050055    | 033418    | 025076    |
| 1 | 010    | 096836    | 049980    | 033475    | 025147    |
| 1 | 020    | 094530    | 049753    | 033462    | 025177    |
| 1 | 050    | 088979    | 048786    | 033172    | 025068    |
| 1 | 100    | 081894    | 046929    | 032384    | 024633    |
| 2 | 001    | 099427    | 049981    | 033337    | 025006    |
| 2 | 003    | 098548    | 049913    | 033324    | 025005    |
| 2 | 010    | 096122    | 049616    | 033232    | 024964    |
| 2 | 020    | 093367    | 049152    | 033062    | 024877    |
| 2 | 050    | 086865    | 047659    | 032411    | 024495    |
| 2 | 100    | 078843    | 045244    | 031235    | 023763    |
| s | 001    | -032913   | -038326   | -032913   | -028001   |
| s | 003    | -032315   | -037534   | -032315   | -027527   |
| s | 010    | -030787   | -035546   | -030787   | -026310   |
| s | 020    | -029182   | -033493   | -029182   | -025024   |
| s | 050    | -025733   | -029172   | -025733   | -022237   |
| s | 100    | -021919   | -024527   | -021919   | -019115   |
| 4 | 001    | 099523    | 050029    | 033369    | 025030    |
| 4 | 003    | 098773    | 050027    | 033400    | 025062    |
| 4 | 010    | 096649    | 049885    | 033411    | 025099    |
| 4 | 020    | 094152    | 049560    | 033333    | 025079    |
| 4 | 050    | 088072    | 048306    | 032848    | 024824    |
| 4 | 100    | 080159    | 045982    | 031740    | 024146    |

TABLE 2 Moments (Continued)

| k | $\tau$ | $\beta_4$ | $\beta_5$ | $\beta_6$ | $\beta_7$ |
|---|--------|-----------|-----------|-----------|-----------|
| 1 | 001    | 020030    | 016692    | 014308    | 012520    |
| 1 | 003    | 020066    | 016724    | 014336    | 012545    |
| 1 | 010    | 020134    | 016786    | 014393    | 012597    |
| 1 | 020    | 020174    | 016828    | 014433    | 012634    |
| 1 | 050    | 020133    | 016817    | 014438    | 012647    |
| 1 | 100    | 019853    | 016620    | 014290    | 012531    |
|   |        |           |           |           |           |
| 2 | 001    | 020007    | 016673    | 014292    | 012505    |
| 2 | 003    | 020009    | 016677    | 014296    | 012509    |
| 2 | 010    | 019988    | 016665    | 014289    | 012505    |
| 2 | 020    | 019935    | 016629    | 014263    | 012486    |
| 2 | 050    | 019673    | 016434    | 014108    | 012359    |
| 2 | 100    | 019154    | 016036    | 013788    | 012091    |
|   |        |           |           |           |           |
| s | 001    | -024170   | -021195   | -018844   | -016950   |
| s | 003    | -023778   | -020861   | -018554   | -016692   |
| s | 010    | -022771   | -020002   | -017806   | -016030   |
| s | 020    | -021703   | -019091   | -017012   | -015326   |
| s | 050    | -019380   | -017104   | -015277   | -013788   |
| s | 100    | -016760   | -014854   | -013307   | -012038   |
|   |        |           |           |           |           |
| 4 | 001    | 020026    | 016689    | 014305    | 012517    |
| 4 | 003    | 020054    | 016714    | 014328    | 012538    |
| 4 | 010    | 020096    | 016755    | 014366    | 012573    |
| 4 | 020    | 020096    | 016763    | 014377    | 012586    |
| 4 | 050    | 019937    | 016654    | 014298    | 012525    |
| 4 | 100    | 019463    | 016294    | 014009    | 012286    |

TABLE 2 Moments (Continued)

| k | $\tau$ | $x_0$  | $x_1$  | $x_2$  | $x_3$  |
|---|--------|--------|--------|--------|--------|
| 1 | 001    | 035096 | 015668 | 009311 | 006267 |
| 1 | 003    | 035244 | 015735 | 009351 | 006294 |
| 1 | 010    | 035656 | 015923 | 009463 | 006369 |
| 1 | 020    | 036123 | 016140 | 009593 | 006457 |
| 1 | 050    | 037207 | 016662 | 009908 | 006670 |
| 1 | 100    | 038502 | 017313 | 010307 | 006942 |
|   |        |        |        |        |        |
| 2 | 001    | 035056 | 021910 | 016455 | 013302 |
| 2 | 003    | 035147 | 021967 | 016497 | 013337 |
| 2 | 010    | 035409 | 022133 | 016623 | 013438 |
| 2 | 020    | 035720 | 022332 | 016773 | 013559 |
| 2 | 050    | 036499 | 022840 | 017157 | 013871 |
| 2 | 100    | 037507 | 023515 | 017672 | 014290 |
|   |        |        |        |        |        |
| s | 001    | 100000 | 045387 | 026641 | 017659 |
| s | 003    | 100000 | 045347 | 026607 | 017632 |
| s | 010    | 100000 | 045254 | 026528 | 017570 |
| s | 020    | 100000 | 045171 | 026454 | 017512 |
| s | 050    | 100000 | 045023 | 026322 | 017406 |
| s | 100    | 100000 | 044908 | 026214 | 017318 |
|   |        |        |        |        |        |
| 4 | 001    | 025063 | 009399 | 005012 | 003133 |
| 4 | 003    | 025160 | 009435 | 005032 | 003145 |
| 4 | 010    | 025418 | 009535 | 005086 | 003178 |
| 4 | 020    | 025702 | 009648 | 005146 | 003216 |
| 4 | 050    | 026319 | 009903 | 005285 | 003304 |
| 4 | 100    | 026995 | 010200 | 005450 | 003409 |

TABLE 2 Moments (Continued)

| k | $\tau$ | $y_0$  | $y_1$   | $y_2$   | $y_3$   |
|---|--------|--------|---------|---------|---------|
| 1 | 001    | 034821 | 015633  | 009295  | 006257  |
| 1 | 003    | 034543 | 015631  | 009304  | 006266  |
| 1 | 010    | 033765 | 015582  | 009308  | 006277  |
| 1 | 020    | 032867 | 015477  | 009288  | 006275  |
| 1 | 050    | 030707 | 015082  | 009160  | 006221  |
| 1 | 100    | 027964 | 014370  | 008871  | 006071  |
| 2 | 001    | 034895 | 021875  | 016433  | 013286  |
| 2 | 003    | 034726 | 021862  | 016432  | 013288  |
| 2 | 010    | 034232 | 021789  | 016405  | 013275  |
| 2 | 020    | 033642 | 021663  | 016349  | 013241  |
| 2 | 050    | 032130 | 021203  | 016100  | 013073  |
| 2 | 100    | 030087 | 020401  | 015624  | 012736  |
| 3 | 001    | 000000 | -007743 | -006557 | -005104 |
| 3 | 003    | 000000 | -007505 | -006402 | -004999 |
| 3 | 010    | 000000 | -006926 | -006012 | -004730 |
| 3 | 020    | 000000 | -006351 | -005609 | -004449 |
| 3 | 050    | 000000 | -005200 | -004764 | -003849 |
| 3 | 100    | 000000 | -004059 | -003869 | -003195 |
| 4 | 001    | 024807 | 009374  | 005003  | 003128  |
| 4 | 003    | 024514 | 009361  | 005004  | 003130  |
| 4 | 010    | 023714 | 009294  | 004993  | 003129  |
| 4 | 020    | 022807 | 009180  | 004963  | 003118  |
| 4 | 050    | 020708 | 008805  | 004841  | 003063  |
| 4 | 100    | 018157 | 008188  | 004604  | 002944  |

Table 3. Scattering Functions

$$\psi(\mu, \tau) = \mu[v_1 Y^{(s)} - v_2 X^{(s)}], \quad \xi(\mu, \tau) = \mu[v_2 Y^{(s)} - v_1 X^{(s)}]$$

$$\phi(\mu, \tau) = (1 + \mu v_4) X^{(s)} - \mu v_3 Y^{(s)}, \quad \eta(\mu, \tau) = (1 - \mu v_4) Y^{(s)} + \mu v_3 X^{(s)}$$

$$\xi(\mu, \tau) = \frac{1}{2} \mu [v_1 Y^{(4)} - v_2 X^{(4)}] + s_1^2 [X^{(4)} - Y^{(4)}]$$

$$\theta(\mu, \tau) = \frac{1}{2} \mu [v_2 Y^{(4)} - v_1 X^{(4)}] - s_1^2 [X^{(4)} - Y^{(4)}]$$

$$\chi(\mu, \tau) = (1 - \mu u_4) X^{(4)} + \mu u_3 Y^{(4)} + t_\mu^2 [X^{(4)} - Y^{(4)}]$$

$$\sigma(\mu, \tau) = (1 + \mu u_4) Y^{(4)} - \mu u_3 X^{(4)} - t_\mu^2 [X^{(4)} - Y^{(4)}]$$

$$\gamma_\ell(\mu, \tau) = a[X^{(s)} + Y^{(s)}], \quad \gamma_r(\mu, \tau) = b[X^{(4)} + Y^{(4)}] - \mu c[X^{(4)} - Y^{(4)}]$$

In the above  $X^{(k)}$  and  $Y^{(k)}$  are abbreviations for  $X_2^{(k)}(\mu, \tau)$  and  $Y_2^{(k)}(\mu, \tau)$ . The coefficients of  $X^{(k)}$  and  $Y^{(k)}$  are defined and tabulated in Table 4.

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TABLE 3 Scattering Function.

$\tau = .001$

| $\mu$ | $\psi$  | $\phi$   | $\xi$   | $\eta$  |
|-------|---------|----------|---------|---------|
| 0.00  | 0.00000 | 1.00000  | 0.00000 | 0.00000 |
| 0.02  | 0.00058 | 1.00435  | 0.00056 | 0.95578 |
| 0.04  | 0.00178 | 1.00310  | 0.00174 | 0.97885 |
| 0.06  | 0.00379 | 1.00101  | 0.00373 | 0.98515 |
| 0.08  | 0.00659 | 0.99810  | 0.00651 | 0.98658 |
| 0.10  | 0.01020 | 0.99439  | 0.01010 | 0.98558 |
| 0.12  | 0.01460 | 0.98988  | 0.01448 | 0.98294 |
| 0.14  | 0.01981 | 0.98456  | 0.01967 | 0.97904 |
| 0.16  | 0.02582 | 0.97844  | 0.02566 | 0.97403 |
| 0.18  | 0.03262 | 0.97152  | 0.03244 | 0.96803 |
| 0.20  | 0.04023 | 0.96379  | 0.04003 | 0.96108 |
| 0.24  | 0.05786 | 0.94593  | 0.05762 | 0.94451 |
| 0.28  | 0.07868 | 0.92486  | 0.07840 | 0.92449 |
| 0.32  | 0.10271 | 0.90058  | 0.10239 | 0.90112 |
| 0.36  | 0.12995 | 0.87309  | 0.12959 | 0.87443 |
| 0.40  | 0.16038 | 0.84240  | 0.15998 | 0.84447 |
| 0.44  | 0.19403 | 0.80849  | 0.19359 | 0.81124 |
| 0.48  | 0.23087 | 0.77137  | 0.23039 | 0.77477 |
| 0.52  | 0.27092 | 0.73104  | 0.27040 | 0.73506 |
| 0.56  | 0.31418 | 0.68780  | 0.31362 | 0.69211 |
| 0.60  | 0.36064 | 0.64075  | 0.36004 | 0.64894 |
| 0.64  | 0.41030 | 0.59080  | 0.40966 | 0.59655 |
| 0.68  | 0.46316 | 0.53763  | 0.46246 | 0.54393 |
| 0.72  | 0.51923 | 0.48125  | 0.51851 | 0.48809 |
| 0.76  | 0.57851 | 0.422167 | 0.57775 | 0.42904 |
| 0.80  | 0.64099 | 0.35887  | 0.64019 | 0.36676 |
| 0.84  | 0.70667 | 0.289287 | 0.70583 | 0.30128 |
| 0.88  | 0.77556 | 0.222365 | 0.77468 | 0.23257 |
| 0.90  | 0.81120 | 0.18784  | 0.81030 | 0.19702 |
| 0.92  | 0.84765 | 0.15123  | 0.84673 | 0.16066 |
| 0.94  | 0.88489 | 0.11381  | 0.88395 | 0.12349 |
| 0.96  | 0.92294 | 0.07559  | 0.92198 | 0.08552 |
| 0.98  | 0.96179 | 0.03657  | 0.96081 | 0.04675 |
| 1.00  | 1.00144 | 0.00010  | 1.00044 | 0.00718 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .001$ 

| $\mu$ | $\zeta$  | $\theta$ | $x$      | $\sigma$ |
|-------|----------|----------|----------|----------|
| 0.00  | 0.000000 | 0.000000 | 1.000000 | 0.000000 |
| 0.02  | 0.000009 | 0.000009 | 1.00279  | 0.95401  |
| 0.04  | 0.000009 | 0.000009 | 1.00282  | 0.97812  |
| 0.06  | 0.000009 | 0.000009 | 1.00283  | 0.98630  |
| 0.08  | 0.000009 | 0.000009 | 1.00283  | 0.99041  |
| 0.10  | 0.000009 | 0.000009 | 1.00284  | 0.99289  |
| 0.12  | 0.000009 | 0.000009 | 1.00284  | 0.99454  |
| 0.14  | 0.000009 | 0.000009 | 1.00284  | 0.99572  |
| 0.16  | 0.000009 | 0.000009 | 1.00284  | 0.99661  |
| 0.18  | 0.000009 | 0.000009 | 1.00284  | 0.99730  |
| 0.20  | 0.000009 | 0.000009 | 1.00284  | 0.99786  |
| 0.24  | 0.000009 | 0.000009 | 1.00285  | 0.99869  |
| 0.28  | 0.000009 | 0.000009 | 1.00285  | 0.99928  |
| 0.32  | 0.000009 | 0.000009 | 1.00285  | 0.99973  |
| 0.36  | 0.000009 | 0.000009 | 1.00285  | 1.00007  |
| 0.40  | 0.000009 | 0.000009 | 1.00285  | 1.00035  |
| 0.44  | 0.000009 | 0.000009 | 1.00285  | 1.00058  |
| 0.48  | 0.000009 | 0.000009 | 1.00285  | 1.00077  |
| 0.52  | 0.000009 | 0.000009 | 1.00285  | 1.00093  |
| 0.56  | 0.000009 | 0.000009 | 1.00285  | 1.00106  |
| 0.60  | 0.000009 | 0.000009 | 1.00285  | 1.00118  |
| 0.64  | 0.000009 | 0.000009 | 1.00285  | 1.00129  |
| 0.68  | 0.000009 | 0.000009 | 1.00285  | 1.00138  |
| 0.72  | 0.000009 | 0.000009 | 1.00285  | 1.00146  |
| 0.76  | 0.000009 | 0.000009 | 1.00285  | 1.00153  |
| 0.80  | 0.000009 | 0.000009 | 1.00285  | 1.00160  |
| 0.84  | 0.000009 | 0.000009 | 1.00285  | 1.00166  |
| 0.88  | 0.000009 | 0.000009 | 1.00285  | 1.00171  |
| 0.90  | 0.000009 | 0.000009 | 1.00285  | 1.00174  |
| 0.92  | 0.000009 | 0.000009 | 1.00285  | 1.00176  |
| 0.94  | 0.000009 | 0.000009 | 1.00285  | 1.00179  |
| 0.96  | 0.000009 | 0.000009 | 1.00285  | 1.00181  |
| 0.98  | 0.000009 | 0.000009 | 1.00285  | 1.00183  |
| 1.00  | 0.000009 | 0.000009 | 1.00285  | 1.00185  |



TABLE 3 Scattering Functions (Continued)

| $\mu$ | $\tau = .001$ |         | $\tau = .003$ |         |
|-------|---------------|---------|---------------|---------|
|       | $Y_e$         | $Y_r$   | $Y_e$         | $Y_r$   |
| 0.00  | 0.49812       | 0.49877 | 0.49452       | 0.49646 |
| 0.02  | 0.97695       | 0.97609 | 0.93219       | 0.93082 |
| 0.04  | 0.98901       | 0.98813 | 0.96579       | 0.96436 |
| 0.06  | 0.99310       | 0.99222 | 0.97756       | 0.97611 |
| 0.08  | 0.99515       | 0.99427 | 0.98356       | 0.98210 |
| 0.10  | 0.99639       | 0.99551 | 0.98719       | 0.98573 |
| 0.12  | 0.99722       | 0.99633 | 0.98963       | 0.98816 |
| 0.14  | 0.99781       | 0.99692 | 0.99138       | 0.98991 |
| 0.16  | 0.99825       | 0.99737 | 0.99269       | 0.99122 |
| 0.18  | 0.99860       | 0.99771 | 0.99372       | 0.99225 |
| 0.20  | 0.99888       | 0.99799 | 0.99454       | 0.99307 |
| 0.24  | 0.99929       | 0.99840 | 0.99577       | 0.99430 |
| 0.28  | 0.99959       | 0.99870 | 0.99666       | 0.99518 |
| 0.32  | 0.99981       | 0.99892 | 0.99732       | 0.99585 |
| 0.36  | 0.99999       | 0.99910 | 0.99784       | 0.99636 |
| 0.40  | 1.00012       | 0.99924 | 0.99825       | 0.99678 |
| 0.44  | 1.00024       | 0.99935 | 0.99859       | 0.99711 |
| 0.48  | 1.00033       | 0.99944 | 0.99888       | 0.99740 |
| 0.52  | 1.00041       | 0.99952 | 0.99912       | 0.99764 |
| 0.56  | 1.00048       | 0.99959 | 0.99932       | 0.99784 |
| 0.60  | 1.00054       | 0.99965 | 0.99950       | 0.99802 |
| 0.64  | 1.00059       | 0.99970 | 0.99965       | 0.99817 |
| 0.68  | 1.00064       | 0.99975 | 0.99979       | 0.99831 |
| 0.72  | 1.00068       | 0.99979 | 0.99991       | 0.99843 |
| 0.76  | 1.00072       | 0.99983 | 1.00002       | 0.99854 |
| 0.80  | 1.00075       | 0.99986 | 1.00012       | 0.99864 |
| 0.84  | 1.00078       | 0.99989 | 1.00021       | 0.99873 |
| 0.88  | 1.00081       | 0.99992 | 1.00029       | 0.99881 |
| 0.90  | 1.00082       | 0.99993 | 1.00033       | 0.99885 |
| 0.92  | 1.00083       | 0.99994 | 1.00037       | 0.99889 |
| 0.94  | 1.00084       | 0.99995 | 1.00040       | 0.99892 |
| 0.96  | 1.00085       | 0.99996 | 1.00043       | 0.99895 |
| 0.98  | 1.00086       | 0.99997 | 1.00047       | 0.99899 |
| 1.00  | 1.00087       | 0.99998 | 1.00050       | 0.99902 |

TABLE 3 Scattering Functions (Continued)

$\tau = .003$

| $\mu$ | $\psi$  | $\phi$  | $\xi$   | $\eta$  |
|-------|---------|---------|---------|---------|
| 0.00  | 0.00000 | 1.00000 | 0.00000 | 0.00000 |
| 0.02  | 0.00093 | 1.01114 | 0.00087 | 0.87201 |
| 0.04  | 0.00215 | 1.01027 | 0.00204 | 0.93848 |
| 0.06  | 0.00417 | 1.00827 | 0.00400 | 0.96028 |
| 0.08  | 0.00699 | 1.00540 | 0.00675 | 0.96967 |
| 0.10  | 0.01061 | 1.00170 | 0.01031 | 0.97350 |
| 0.12  | 0.01504 | 0.99717 | 0.01468 | 0.97413 |
| 0.14  | 0.02026 | 0.99182 | 0.01985 | 0.97256 |
| 0.16  | 0.02630 | 0.98567 | 0.02582 | 0.96931 |
| 0.18  | 0.03313 | 0.97870 | 0.03260 | 0.96468 |
| 0.20  | 0.04077 | 0.97092 | 0.04018 | 0.95882 |
| 0.24  | 0.05847 | 0.95293 | 0.05775 | 0.94387 |
| 0.28  | 0.07938 | 0.93170 | 0.07854 | 0.92497 |
| 0.32  | 0.10351 | 0.90724 | 0.10255 | 0.90241 |
| 0.36  | 0.13085 | 0.87954 | 0.12977 | 0.87631 |
| 0.40  | 0.16141 | 0.84861 | 0.16021 | 0.84677 |
| 0.44  | 0.19519 | 0.81445 | 0.19387 | 0.81385 |
| 0.48  | 0.23219 | 0.77705 | 0.23075 | 0.77759 |
| 0.52  | 0.27240 | 0.73642 | 0.27084 | 0.73800 |
| 0.56  | 0.31583 | 0.69256 | 0.31415 | 0.69511 |
| 0.60  | 0.36247 | 0.64546 | 0.36067 | 0.64894 |
| 0.64  | 0.41234 | 0.59513 | 0.41042 | 0.59948 |
| 0.68  | 0.46542 | 0.54157 | 0.46338 | 0.54676 |
| 0.72  | 0.52171 | 0.48477 | 0.51955 | 0.49078 |
| 0.76  | 0.58123 | 0.42474 | 0.57895 | 0.43153 |
| 0.80  | 0.64396 | 0.36148 | 0.64156 | 0.36903 |
| 0.84  | 0.70991 | 0.29498 | 0.70739 | 0.30328 |
| 0.88  | 0.77907 | 0.22526 | 0.77643 | 0.23428 |
| 0.90  | 0.81486 | 0.18918 | 0.81316 | 0.19856 |
| 0.92  | 0.85145 | 0.15229 | 0.84869 | 0.16203 |
| 0.94  | 0.88885 | 0.11460 | 0.88603 | 0.12469 |
| 0.96  | 0.92705 | 0.07610 | 0.92417 | 0.08654 |
| 0.98  | 0.96606 | 0.03679 | 0.96312 | 0.04758 |
| 1.00  | 1.00587 | 0.00030 | 1.00287 | 0.00780 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .003$ 

| $\mu$ | $\zeta$  | $\theta$ | $\chi$   | $\sigma$ |
|-------|----------|----------|----------|----------|
| 0.00  | 0.000000 | 0.000000 | 1.000000 | 0.000000 |
| 0.02  | 0.000026 | 0.000026 | 1.00687  | 0.86750  |
| 0.04  | 0.000027 | 0.000027 | 1.00710  | 0.93481  |
| 0.06  | 0.000027 | 0.000027 | 1.00718  | 0.95839  |
| 0.08  | 0.000028 | 0.000028 | 1.00723  | 0.97040  |
| 0.10  | 0.000028 | 0.000028 | 1.00725  | 0.97768  |
| 0.12  | 0.000028 | 0.000028 | 1.00727  | 0.98256  |
| 0.14  | 0.000028 | 0.000028 | 1.00728  | 0.98607  |
| 0.16  | 0.000028 | 0.000028 | 1.00729  | 0.98870  |
| 0.18  | 0.000028 | 0.000028 | 1.00730  | 0.99076  |
| 0.20  | 0.000028 | 0.000028 | 1.00730  | 0.99241  |
| 0.24  | 0.000028 | 0.000028 | 1.00731  | 0.99488  |
| 0.28  | 0.000028 | 0.000028 | 1.00732  | 0.99665  |
| 0.32  | 0.000028 | 0.000028 | 1.00732  | 0.99798  |
| 0.36  | 0.000028 | 0.000028 | 1.00732  | 0.99902  |
| 0.40  | 0.000028 | 0.000028 | 1.00733  | 0.99985  |
| 0.44  | 0.000028 | 0.000028 | 1.00733  | 1.00053  |
| 0.48  | 0.000028 | 0.000028 | 1.00733  | 1.00110  |
| 0.52  | 0.000028 | 0.000028 | 1.00733  | 1.00158  |
| 0.56  | 0.000028 | 0.000028 | 1.00733  | 1.00199  |
| 0.60  | 0.000028 | 0.000028 | 1.00733  | 1.00235  |
| 0.64  | 0.000028 | 0.000028 | 1.00734  | 1.00266  |
| 0.68  | 0.000028 | 0.000028 | 1.00734  | 1.00293  |
| 0.72  | 0.000028 | 0.000028 | 1.00734  | 1.00318  |
| 0.76  | 0.000028 | 0.000028 | 1.00734  | 1.00340  |
| 0.80  | 0.000028 | 0.000028 | 1.00734  | 1.00360  |
| 0.84  | 0.000028 | 0.000028 | 1.00734  | 1.00377  |
| 0.88  | 0.000028 | 0.000028 | 1.00734  | 1.00394  |
| 0.90  | 0.000028 | 0.000028 | 1.00734  | 1.00401  |
| 0.92  | 0.000028 | 0.000028 | 1.00734  | 1.00408  |
| 0.94  | 0.000028 | 0.000028 | 1.00734  | 1.00415  |
| 0.96  | 0.000028 | 0.000028 | 1.00734  | 1.00422  |
| 0.98  | 0.000028 | 0.000028 | 1.00734  | 1.00428  |
| 1.00  | 0.000028 | 0.000028 | 1.00734  | 1.00435  |

TABLE 3 Scattering Functions (Continued)

| $\mu$ | $\tau = .010$ |         | $\tau = .020$ |         |
|-------|---------------|---------|---------------|---------|
|       | $Y_L$         | $Y_T$   | $Y_L$         | $Y_T$   |
| 0.00  | 0.48292       | 0.48961 | 0.47088       | 0.48180 |
| 0.02  | 0.80273       | 0.80293 | 0.68089       | 0.68208 |
| 0.04  | 0.88925       | 0.88930 | 0.80217       | 0.80265 |
| 0.06  | 0.92317       | 0.92320 | 0.85764       | 0.85795 |
| 0.08  | 0.94121       | 0.94122 | 0.88895       | 0.88920 |
| 0.10  | 0.95239       | 0.95240 | 0.90901       | 0.90922 |
| 0.12  | 0.96000       | 0.96001 | 0.92294       | 0.92313 |
| 0.14  | 0.96552       | 0.96552 | 0.93317       | 0.93335 |
| 0.16  | 0.96969       | 0.96970 | 0.94101       | 0.94118 |
| 0.18  | 0.97297       | 0.97297 | 0.94720       | 0.94736 |
| 0.20  | 0.97561       | 0.97561 | 0.95221       | 0.95236 |
| 0.24  | 0.97959       | 0.97959 | 0.95984       | 0.95998 |
| 0.28  | 0.98245       | 0.98245 | 0.96537       | 0.96550 |
| 0.32  | 0.98461       | 0.98461 | 0.96956       | 0.96968 |
| 0.36  | 0.98630       | 0.98630 | 0.97284       | 0.97295 |
| 0.40  | 0.98765       | 0.98765 | 0.97549       | 0.97559 |
| 0.44  | 0.98876       | 0.98876 | 0.97766       | 0.97776 |
| 0.48  | 0.98969       | 0.98969 | 0.97948       | 0.97957 |
| 0.52  | 0.99047       | 0.99047 | 0.98102       | 0.98111 |
| 0.56  | 0.99115       | 0.99115 | 0.98235       | 0.98244 |
| 0.60  | 0.99173       | 0.99173 | 0.98350       | 0.98358 |
| 0.64  | 0.99225       | 0.99225 | 0.98451       | 0.98459 |
| 0.68  | 0.99270       | 0.99270 | 0.98539       | 0.98548 |
| 0.72  | 0.99310       | 0.99310 | 0.98618       | 0.98627 |
| 0.76  | 0.99346       | 0.99346 | 0.98688       | 0.98696 |
| 0.80  | 0.99379       | 0.99379 | 0.98751       | 0.98761 |
| 0.84  | 0.99408       | 0.99408 | 0.98808       | 0.98819 |
| 0.88  | 0.99435       | 0.99435 | 0.98859       | 0.98871 |
| 0.90  | 0.99447       | 0.99447 | 0.98883       | 0.98896 |
| 0.92  | 0.99459       | 0.99459 | 0.98905       | 0.98919 |
| 0.94  | 0.99471       | 0.99471 | 0.98927       | 0.98942 |
| 0.96  | 0.99482       | 0.99482 | 0.98947       | 0.98963 |
| 0.98  | 0.99492       | 0.99492 | 0.98966       | 0.98984 |
| 1.00  | 0.99502       | 0.99502 | 0.98985       | 0.99004 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .010$ 

| $\mu$ | $\psi$  | $\phi$  | $\xi$   | $\eta$  |
|-------|---------|---------|---------|---------|
| 0.00  | 0.00000 | 1.00000 | 0.00000 | 0.00000 |
| 0.02  | 0.00194 | 1.02660 | 0.00178 | 0.63183 |
| 0.04  | 0.00336 | 1.02830 | 0.00300 | 0.80664 |
| 0.06  | 0.00546 | 1.02732 | 0.00491 | 0.87379 |
| 0.08  | 0.00835 | 1.02500 | 0.00759 | 0.90781 |
| 0.10  | 0.01203 | 1.02163 | 0.01108 | 0.92707 |
| 0.12  | 0.01653 | 1.01732 | 0.01537 | 0.93823 |
| 0.14  | 0.02183 | 1.01213 | 0.02048 | 0.94429 |
| 0.16  | 0.02795 | 1.00606 | 0.02639 | 0.94681 |
| 0.18  | 0.03488 | 0.99914 | 0.03312 | 0.94666 |
| 0.20  | 0.04252 | 0.99138 | 0.04067 | 0.94439 |
| 0.24  | 0.06055 | 0.97334 | 0.05819 | 0.93473 |
| 0.28  | 0.08173 | 0.95195 | 0.07897 | 0.91950 |
| 0.32  | 0.10617 | 0.92725 | 0.10301 | 0.89953 |
| 0.36  | 0.13387 | 0.89922 | 0.13031 | 0.87529 |
| 0.40  | 0.16482 | 0.86788 | 0.16087 | 0.84706 |
| 0.44  | 0.19904 | 0.83323 | 0.19468 | 0.81504 |
| 0.48  | 0.23651 | 0.79527 | 0.23175 | 0.77935 |
| 0.52  | 0.27724 | 0.75401 | 0.27208 | 0.74006 |
| 0.56  | 0.32123 | 0.70943 | 0.31567 | 0.69724 |
| 0.60  | 0.36847 | 0.66155 | 0.36251 | 0.65093 |
| 0.64  | 0.41898 | 0.61037 | 0.41262 | 0.60118 |
| 0.68  | 0.47274 | 0.55587 | 0.46598 | 0.54799 |
| 0.72  | 0.52976 | 0.49808 | 0.52260 | 0.49141 |
| 0.76  | 0.59004 | 0.43698 | 0.58248 | 0.43143 |
| 0.80  | 0.65358 | 0.37257 | 0.64562 | 0.36808 |
| 0.84  | 0.72038 | 0.30486 | 0.71201 | 0.30136 |
| 0.88  | 0.79043 | 0.23384 | 0.78167 | 0.23128 |
| 0.90  | 0.82668 | 0.19710 | 0.81772 | 0.19498 |
| 0.92  | 0.86375 | 0.15952 | 0.85458 | 0.15785 |
| 0.94  | 0.90163 | 0.12112 | 0.89226 | 0.11988 |
| 0.96  | 0.94032 | 0.08190 | 0.93075 | 0.08108 |
| 0.98  | 0.97983 | 0.04185 | 0.97006 | 0.04144 |
| 1.00  | 1.02015 | 0.00097 | 1.01018 | 0.00097 |

TABLE 3 Scattering Functions (Continued)

$\tau = .010$

| $\mu$ | $\zeta$ | $\theta$ | $\chi$ | $\sigma$ |
|-------|---------|----------|--------|----------|
| 000   | 000000  | 000000   | 100000 | 000000   |
| 002   | 000077  | 000076   | 101631 | 062210   |
| 004   | 000086  | 000086   | 101812 | 079651   |
| 006   | 000090  | 000090   | 101879 | 086498   |
| 008   | 000091  | 000091   | 101914 | 090142   |
| 010   | 000093  | 000093   | 101935 | 092401   |
| 012   | 000093  | 000093   | 101950 | 093939   |
| 014   | 000094  | 000094   | 101960 | 095053   |
| 016   | 000094  | 000094   | 101968 | 095898   |
| 018   | 000095  | 000095   | 101974 | 096560   |
| 020   | 000095  | 000095   | 101979 | 097093   |
| 024   | 000095  | 000095   | 101986 | 097898   |
| 028   | 000096  | 000096   | 101992 | 098477   |
| 032   | 000096  | 000096   | 101996 | 098913   |
| 036   | 000096  | 000096   | 101999 | 099254   |
| 040   | 000096  | 000096   | 102001 | 099528   |
| 044   | 000096  | 000096   | 102003 | 099752   |
| 048   | 000096  | 000096   | 102005 | 099940   |
| 052   | 000096  | 000096   | 102007 | 100098   |
| 056   | 000096  | 000096   | 102008 | 100235   |
| 060   | 000096  | 000096   | 102009 | 100353   |
| 064   | 000097  | 000096   | 102010 | 100457   |
| 068   | 000097  | 000097   | 102011 | 100548   |
| 072   | 000097  | 000097   | 102011 | 100630   |
| 076   | 000097  | 000097   | 102012 | 100703   |
| 080   | 000097  | 000097   | 102013 | 100768   |
| 084   | 000097  | 000097   | 102013 | 100828   |
| 088   | 000097  | 000097   | 102014 | 100882   |
| 090   | 000097  | 000097   | 102014 | 100907   |
| 092   | 000097  | 000097   | 102014 | 100931   |
| 094   | 000097  | 000097   | 102014 | 100954   |
| 096   | 000097  | 000097   | 102015 | 100976   |
| 098   | 000097  | 000097   | 102015 | 100998   |
| 100   | 000097  | 000097   | 102015 | 101018   |

TABLE 3 Scattering Functions (Continued)

| $\mu$ | $\tau = .050$ |         | $\tau = .100$ |         |
|-------|---------------|---------|---------------|---------|
|       | $Y_L$         | $Y_T$   | $Y_L$         | $Y_T$   |
| 0.00  | 0.44340       | 0.46291 | 0.41013       | 0.43832 |
| 0.02  | 0.52231       | 0.52863 | 0.45145       | 0.46725 |
| 0.04  | 0.63547       | 0.63808 | 0.51160       | 0.52051 |
| 0.06  | 0.71314       | 0.71453 | 0.57627       | 0.58173 |
| 0.08  | 0.76507       | 0.76592 | 0.63110       | 0.63472 |
| 0.10  | 0.80153       | 0.80210 | 0.67530       | 0.67785 |
| 0.12  | 0.82838       | 0.82878 | 0.71088       | 0.71275 |
| 0.14  | 0.84890       | 0.84920 | 0.73983       | 0.74125 |
| 0.16  | 0.86509       | 0.86531 | 0.76373       | 0.76483 |
| 0.18  | 0.87816       | 0.87834 | 0.78373       | 0.78459 |
| 0.20  | 0.88893       | 0.88908 | 0.80068       | 0.80137 |
| 0.24  | 0.90565       | 0.90574 | 0.82781       | 0.82826 |
| 0.28  | 0.91800       | 0.91806 | 0.84852       | 0.84882 |
| 0.32  | 0.92750       | 0.92754 | 0.86483       | 0.86502 |
| 0.36  | 0.93503       | 0.93506 | 0.87799       | 0.87811 |
| 0.40  | 0.94115       | 0.94117 | 0.88883       | 0.88890 |
| 0.44  | 0.94621       | 0.94622 | 0.89791       | 0.89794 |
| 0.48  | 0.95048       | 0.95048 | 0.90563       | 0.90562 |
| 0.52  | 0.95412       | 0.95411 | 0.91227       | 0.91224 |
| 0.56  | 0.95726       | 0.95725 | 0.91804       | 0.91799 |
| 0.60  | 0.96000       | 0.95999 | 0.92310       | 0.92303 |
| 0.64  | 0.96240       | 0.96239 | 0.92757       | 0.92749 |
| 0.68  | 0.96454       | 0.96453 | 0.93156       | 0.93147 |
| 0.72  | 0.96645       | 0.96643 | 0.93513       | 0.93503 |
| 0.76  | 0.96816       | 0.96814 | 0.93835       | 0.93824 |
| 0.80  | 0.96971       | 0.96969 | 0.94126       | 0.94115 |
| 0.84  | 0.97111       | 0.97109 | 0.94392       | 0.94379 |
| 0.88  | 0.97239       | 0.97237 | 0.94634       | 0.94621 |
| 0.90  | 0.97299       | 0.97297 | 0.94748       | 0.94735 |
| 0.92  | 0.97356       | 0.97354 | 0.94857       | 0.94843 |
| 0.94  | 0.97411       | 0.97409 | 0.94961       | 0.94948 |
| 0.96  | 0.97463       | 0.97461 | 0.95062       | 0.95048 |
| 0.98  | 0.97514       | 0.97512 | 0.95158       | 0.95144 |
| 1.00  | 0.97563       | 0.97560 | 0.95251       | 0.95237 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .000$ 

| $\mu$ | $\psi$  | $\phi$  | $\xi$   | $\eta$  |
|-------|---------|---------|---------|---------|
| 0.00  | 0.00000 | 1.00000 | 0.00000 | 0.00000 |
| 0.02  | 0.00296 | 1.03832 | 0.00269 | 0.40188 |
| 0.04  | 0.00482 | 1.04501 | 0.00417 | 0.64933 |
| 0.06  | 0.00713 | 1.04614 | 0.00610 | 0.76166 |
| 0.08  | 0.01015 | 1.04493 | 0.00872 | 0.82360 |
| 0.10  | 0.01394 | 1.04223 | 0.01212 | 0.86153 |
| 0.12  | 0.01853 | 1.03834 | 0.01631 | 0.88601 |
| 0.14  | 0.02393 | 1.03340 | 0.02131 | 0.90204 |
| 0.16  | 0.03015 | 1.02749 | 0.02713 | 0.91228 |
| 0.18  | 0.03718 | 1.02064 | 0.03376 | 0.91828 |
| 0.20  | 0.04504 | 1.01289 | 0.04122 | 0.92102 |
| 0.24  | 0.06321 | 0.99473 | 0.05859 | 0.91901 |
| 0.28  | 0.08468 | 0.97308 | 0.07925 | 0.90929 |
| 0.32  | 0.10944 | 0.94798 | 0.10322 | 0.89343 |
| 0.36  | 0.13750 | 0.91946 | 0.13047 | 0.87233 |
| 0.40  | 0.16886 | 0.88753 | 0.16103 | 0.84652 |
| 0.44  | 0.20352 | 0.85219 | 0.19489 | 0.81637 |
| 0.48  | 0.24148 | 0.81346 | 0.23204 | 0.78211 |
| 0.52  | 0.28274 | 0.77134 | 0.27250 | 0.74390 |
| 0.56  | 0.32730 | 0.72582 | 0.31626 | 0.70187 |
| 0.60  | 0.37516 | 0.67692 | 0.36332 | 0.65609 |
| 0.64  | 0.42632 | 0.62464 | 0.41367 | 0.60664 |
| 0.68  | 0.48078 | 0.56897 | 0.46733 | 0.55356 |
| 0.72  | 0.53854 | 0.50992 | 0.52429 | 0.49691 |
| 0.76  | 0.59960 | 0.44750 | 0.58455 | 0.43670 |
| 0.80  | 0.66396 | 0.38169 | 0.64811 | 0.37296 |
| 0.84  | 0.73162 | 0.31250 | 0.71496 | 0.30571 |
| 0.88  | 0.80258 | 0.23993 | 0.78512 | 0.23498 |
| 0.90  | 0.83929 | 0.20238 | 0.82143 | 0.19831 |
| 0.92  | 0.87683 | 0.16399 | 0.85857 | 0.16078 |
| 0.94  | 0.91519 | 0.12476 | 0.89653 | 0.12237 |
| 0.96  | 0.95438 | 0.08467 | 0.93532 | 0.08311 |
| 0.98  | 0.99439 | 0.04375 | 0.97493 | 0.04298 |
| 1.00  | 1.03523 | 0.00198 | 1.01536 | 0.00199 |



TABLE 3 Scattering Functions (Continued)

 $\tau = .020$ 

| $\mu$ | $\zeta$ | $\theta$ | $\chi$ | $\sigma$ |
|-------|---------|----------|--------|----------|
| 000   | 000000  | 000000   | 100000 | 000000   |
| 002   | 000127  | 000126   | 102382 | 038938   |
| 004   | 000158  | 000157   | 102888 | 063396   |
| 006   | 000171  | 000170   | 103093 | 074643   |
| 008   | 000178  | 000177   | 103204 | 081005   |
| 010   | 000182  | 000182   | 103273 | 085083   |
| 012   | 000185  | 000184   | 103321 | 087917   |
| 014   | 000187  | 000187   | 103355 | 089999   |
| 016   | 000189  | 000188   | 103382 | 091594   |
| 018   | 000190  | 000190   | 103402 | 092854   |
| 020   | 000191  | 000191   | 103419 | 093874   |
| 024   | 000192  | 000192   | 103444 | 095427   |
| 028   | 000193  | 000193   | 103462 | 096552   |
| 032   | 000194  | 000194   | 103476 | 097404   |
| 036   | 000195  | 000194   | 103486 | 098073   |
| 040   | 000196  | 000195   | 103495 | 098611   |
| 044   | 000196  | 000195   | 103502 | 099053   |
| 048   | 000197  | 000195   | 103508 | 099423   |
| 052   | 000197  | 000195   | 103513 | 099737   |
| 056   | 000197  | 000195   | 103517 | 100006   |
| 060   | 000198  | 000195   | 103521 | 100240   |
| 064   | 000198  | 000195   | 103525 | 100445   |
| 068   | 000198  | 000195   | 103528 | 100626   |
| 072   | 000198  | 000195   | 103531 | 100787   |
| 076   | 000199  | 000195   | 103533 | 100931   |
| 080   | 000199  | 000195   | 103535 | 101061   |
| 084   | 000199  | 000196   | 103537 | 101179   |
| 088   | 000199  | 000196   | 103539 | 101286   |
| 090   | 000199  | 000196   | 103540 | 101335   |
| 092   | 000199  | 000197   | 103540 | 101383   |
| 094   | 000199  | 000197   | 103541 | 101428   |
| 096   | 000199  | 000198   | 103541 | 101472   |
| 098   | 000199  | 000198   | 103542 | 101514   |
| 100   | 000198  | 000199   | 103542 | 101555   |

TABLE 3 Scattering Functions (Continued)

 $\tau = .050$ 

| $\mu$ | $\psi$ | $\phi$ | $\xi$  | $\eta$ |
|-------|--------|--------|--------|--------|
| 000   | 000000 | 100000 | 000000 | 000000 |
| 002   | 000444 | 105101 | 000391 | 011821 |
| 004   | 000787 | 107146 | 000659 | 034657 |
| 006   | 001112 | 108037 | 000897 | 050697 |
| 008   | 001477 | 108391 | 001158 | 061389 |
| 010   | 001904 | 108432 | 001499 | 068781 |
| 012   | 002402 | 108258 | 001900 | 074070 |
| 014   | 002977 | 107916 | 002377 | 077943 |
| 016   | 003632 | 107432 | 002934 | 080811 |
| 018   | 004368 | 106824 | 003570 | 082934 |
| 020   | 005187 | 106100 | 004289 | 084483 |
| 024   | 007073 | 104332 | 005976 | 086290 |
| 028   | 009295 | 102161 | 007998 | 086817 |
| 032   | 011855 | 099602 | 010357 | 086383 |
| 036   | 014752 | 096668 | 013054 | 085176 |
| 040   | 017989 | 093362 | 016089 | 083313 |
| 044   | 021565 | 089690 | 019464 | 080870 |
| 048   | 025481 | 085655 | 023178 | 077902 |
| 052   | 029736 | 081257 | 027232 | 074445 |
| 056   | 034332 | 076498 | 031627 | 070527 |
| 060   | 039268 | 071380 | 036361 | 066168 |
| 064   | 044543 | 065903 | 041435 | 061383 |
| 068   | 050160 | 060067 | 046850 | 056184 |
| 072   | 056116 | 053874 | 052604 | 050581 |
| 076   | 062413 | 047323 | 058700 | 044581 |
| 080   | 069050 | 040415 | 065135 | 038190 |
| 084   | 076028 | 033150 | 071911 | 031414 |
| 088   | 083346 | 025528 | 079027 | 024255 |
| 090   | 087133 | 021583 | 082713 | 020533 |
| 092   | 091004 | 017549 | 086484 | 016717 |
| 094   | 094961 | 013426 | 090340 | 012808 |
| 096   | 099003 | 009214 | 094281 | 008804 |
| 098   | 103130 | 004913 | 098308 | 004707 |
| 100   | 107343 | 000523 | 102419 | 000517 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .050$ 

| $\mu$ | $\zeta$  | $\theta$ | $\chi$   | $\sigma$ |
|-------|----------|----------|----------|----------|
| 0.00  | 0.000000 | 0.000000 | 1.000000 | 0.000000 |
| 0.02  | 0.002000 | 0.00192  | 1.03199  | 0.10621  |
| 0.04  | 0.00308  | 0.00301  | 1.04627  | 0.32630  |
| 0.06  | 0.00365  | 0.00360  | 1.05360  | 0.48301  |
| 0.08  | 0.00399  | 0.00395  | 1.05799  | 0.58896  |
| 0.10  | 0.00422  | 0.00418  | 1.06089  | 0.66378  |
| 0.12  | 0.00438  | 0.00435  | 1.06295  | 0.71904  |
| 0.14  | 0.00450  | 0.00448  | 1.06449  | 0.76138  |
| 0.16  | 0.00460  | 0.00457  | 1.06568  | 0.79481  |
| 0.18  | 0.00467  | 0.00465  | 1.06663  | 0.82184  |
| 0.20  | 0.00474  | 0.00471  | 1.06740  | 0.84415  |
| 0.24  | 0.00483  | 0.00481  | 1.06859  | 0.87878  |
| 0.28  | 0.00490  | 0.00488  | 1.06945  | 0.90440  |
| 0.32  | 0.00495  | 0.00494  | 1.07011  | 0.92411  |
| 0.36  | 0.00499  | 0.00498  | 1.07063  | 0.93975  |
| 0.40  | 0.00503  | 0.00501  | 1.07105  | 0.95246  |
| 0.44  | 0.00505  | 0.00504  | 1.07140  | 0.96298  |
| 0.48  | 0.00508  | 0.00507  | 1.07169  | 0.97184  |
| 0.52  | 0.00510  | 0.00509  | 1.07194  | 0.97941  |
| 0.56  | 0.00511  | 0.00510  | 1.07215  | 0.98594  |
| 0.60  | 0.00513  | 0.00512  | 1.07234  | 0.99163  |
| 0.64  | 0.00514  | 0.00513  | 1.07250  | 0.99664  |
| 0.68  | 0.00515  | 0.00514  | 1.07264  | 1.00109  |
| 0.72  | 0.00516  | 0.00515  | 1.07277  | 1.00505  |
| 0.76  | 0.00517  | 0.00516  | 1.07289  | 1.00862  |
| 0.80  | 0.00518  | 0.00517  | 1.07299  | 1.01183  |
| 0.84  | 0.00519  | 0.00518  | 1.07309  | 1.01475  |
| 0.88  | 0.00520  | 0.00519  | 1.07317  | 1.01742  |
| 0.90  | 0.00520  | 0.00519  | 1.07321  | 1.01866  |
| 0.92  | 0.00520  | 0.00519  | 1.07325  | 1.01985  |
| 0.94  | 0.00521  | 0.00520  | 1.07329  | 1.02100  |
| 0.96  | 0.00521  | 0.00520  | 1.07332  | 1.02209  |
| 0.98  | 0.00521  | 0.00520  | 1.07336  | 1.02314  |
| 1.00  | 0.00521  | 0.00520  | 1.07339  | 1.02416  |

TABLE 3 Scattering Functions (Continued)

 $\tau = .100$ 

| $\mu$ | $\psi$ | $\phi$ | $\xi$  | $\eta$ |
|-------|--------|--------|--------|--------|
| 000   | 000000 | 100000 | 000000 | 000000 |
| 002   | 000527 | 105505 | 000435 | 003540 |
| 004   | 001051 | 108644 | 000843 | 014071 |
| 006   | 001542 | 110549 | 001190 | 027037 |
| 008   | 002038 | 111679 | 001524 | 038388 |
| 010   | 002569 | 112305 | 001881 | 047591 |
| 012   | 003154 | 112574 | 002285 | 054940 |
| 014   | 003803 | 112574 | 002748 | 060810 |
| 016   | 004525 | 112357 | 003280 | 065514 |
| 018   | 005323 | 111957 | 003886 | 069290 |
| 020   | 006200 | 111396 | 004569 | 072317 |
| 024   | 008201 | 109848 | 006178 | 076622 |
| 028   | 010539 | 107794 | 008119 | 079154 |
| 032   | 013219 | 105276 | 010400 | 080345 |
| 036   | 016244 | 102320 | 013025 | 080471 |
| 040   | 019618 | 098943 | 015997 | 079709 |
| 044   | 023342 | 095155 | 019318 | 078182 |
| 048   | 027417 | 090965 | 022989 | 075977 |
| 052   | 031843 | 086376 | 027011 | 073155 |
| 056   | 036621 | 081394 | 031384 | 069764 |
| 060   | 041751 | 076021 | 036110 | 065837 |
| 064   | 047235 | 070259 | 041188 | 061403 |
| 068   | 053071 | 064110 | 046614 | 056482 |
| 072   | 059260 | 057575 | 052403 | 051091 |
| 076   | 065803 | 050656 | 058540 | 045244 |
| 080   | 072700 | 043353 | 065030 | 038951 |
| 084   | 079950 | 035667 | 071874 | 032222 |
| 088   | 087553 | 027599 | 079071 | 025063 |
| 090   | 091488 | 023422 | 082802 | 021325 |
| 092   | 095511 | 019149 | 086522 | 017482 |
| 094   | 099622 | 014781 | 090530 | 013534 |
| 096   | 103822 | 010317 | 094527 | 009483 |
| 098   | 108110 | 005758 | 098612 | 005328 |
| 100   | 112487 | 001104 | 102785 | 001071 |

TABLE 3 Scattering Functions (Continued)

 $\tau = .100$ 

| $\mu$ | $\zeta$ | $\theta$ | $\chi$ | $\sigma$ |
|-------|---------|----------|--------|----------|
| 000   | 000000  | 000000   | 100000 | 000000   |
| 002   | 000240  | 000214   | 103461 | 002714   |
| 004   | 000436  | 000406   | 105656 | 012306   |
| 006   | 000573  | 000545   | 107111 | 024562   |
| 008   | 000668  | 000643   | 108107 | 035473   |
| 010   | 000737  | 000715   | 108823 | 044465   |
| 012   | 000790  | 000770   | 109359 | 051790   |
| 014   | 000830  | 000812   | 109776 | 057798   |
| 016   | 000863  | 000846   | 110107 | 062783   |
| 018   | 000889  | 000874   | 110378 | 066972   |
| 020   | 000912  | 000897   | 110602 | 070533   |
| 024   | 000946  | 000934   | 110953 | 076251   |
| 028   | 000972  | 000961   | 111215 | 080629   |
| 032   | 000992  | 000982   | 111418 | 084084   |
| 036   | 001009  | 000999   | 111579 | 086877   |
| 040   | 001022  | 001012   | 111711 | 089182   |
| 044   | 001033  | 001024   | 111820 | 091114   |
| 048   | 001042  | 001033   | 111913 | 092757   |
| 052   | 001050  | 001041   | 111992 | 094172   |
| 056   | 001057  | 001049   | 112061 | 095402   |
| 060   | 001063  | 001055   | 112120 | 096481   |
| 064   | 001068  | 001060   | 112173 | 097436   |
| 068   | 001073  | 001065   | 112220 | 098287   |
| 072   | 001077  | 001069   | 112262 | 099050   |
| 076   | 001081  | 001073   | 112300 | 099737   |
| 080   | 001084  | 001077   | 112334 | 100360   |
| 084   | 001087  | 001080   | 112365 | 100927   |
| 088   | 001090  | 001083   | 112393 | 101446   |
| 090   | 001092  | 001084   | 112406 | 101689   |
| 092   | 001093  | 001085   | 112419 | 101922   |
| 094   | 001094  | 001087   | 112431 | 102145   |
| 096   | 001095  | 001088   | 112443 | 102360   |
| 098   | 001097  | 001089   | 112454 | 102566   |
| 100   | 001098  | 001090   | 112465 | 102764   |

Table 4. Coefficients

Coefficients relating to the computation of scattering functions

$$v_1, v_2, v_3, v_4, u_3, u_4, u_5, s, t, a, b, c, Q, q, \bar{s}$$

The coefficients are defined by the following relations:

$$q = y_0^{(3)} / (\bar{x}_1^{(3)} + \bar{y}_1^{(3)}) , \quad v_2 + v_1 = \Delta_1(k_1\delta_1 - k_2\delta_2)$$

$$v_2 - v_1 = \Delta_2(k_1\delta_1 - k_2\delta_2) , \quad v_4 + v_3 = \Delta_1(d_1k_1 - d_0k_2)$$

$$v_4 - v_3 = \Delta_2[c_1\delta_1 - c_0\delta_2 - 2Q(d_0\delta_1 - d_1\delta_2)]$$

$$u_4 + u_3 = \Delta_1[c_1\delta_1 - c_0\delta_2] , \quad u_4 - u_3 = \Delta_2[d_1k_1 - d_0k_2]$$

$$u_5 = \Delta_2[c_0k_1 - c_1k_2] , \quad s = \frac{1}{2}Q(v_2 - v_1) , \quad t = Q(u_4 - u_3)$$

$$a = \frac{3}{8}Q(v_2 - v_1)(d_0 - d_2) , \quad b = \frac{3}{8}Q(u_4 - u_3)(d_0 - d_2)$$

$$c = \frac{3}{8}Q(d_0 - d_2)u_5 , \quad Q = \frac{c_0 - c_2}{(d_0 - d_2)\tau + 2(d_1 - d_3)}$$

$$\bar{s} = 1 - ak_1 - bc_1 + cd_2 ,$$

where

$$\frac{1}{\Delta_1} = d_0\delta_1 - d_1\delta_2 , \quad \frac{1}{\Delta_2} = c_0k_1 - c_1k_2 - 2Q(d_1k_1 - d_0k_2)$$

$$c_0 = \alpha_0^{(4)} + \beta_0^{(4)} - \frac{8}{3} , \quad d_0 = \alpha_0^{(4)} - \beta_0^{(4)} - \frac{8}{3} , \quad c_p = \alpha_p^{(4)} + \beta_p^{(4)}$$

$$d_p = \alpha_p^{(4)} - \beta_p^{(4)} , \quad k_p = \alpha_p^{(s)} + \beta_p^{(s)} , \quad \delta_p = \alpha_p^{(s)} - \beta_p^{(s)} ,$$

$p \geq 1$ ;  $\alpha_p^{(k)}$ ,  $\beta_p^{(k)}$ ,  $x_p^{(k)}$ , and  $y_p^{(k)}$  are the moments defined and tabulated in Table 2.

TABLE 4 Coefficients

| $\tau$ |      | $v_1$    |    | $v_2$ |    | $v_3$ |
|--------|------|----------|----|-------|----|-------|
| 000    | -0   | 18750    | -0 | 18750 | 1  | 14583 |
| 001    | -0   | 18847    | -0 | 18897 | 1  | 13257 |
| 003    | -0   | 18975    | -0 | 19123 | 1  | 11348 |
| 010    | -0   | 19272    | -0 | 19756 | 1  | 06454 |
| 020    | -0   | 19556    | -0 | 20501 | 1  | 01264 |
| 050    | -0   | 20070    | -0 | 22308 | 0  | 90353 |
| 100    | -0   | 20512    | -0 | 24689 | 0  | 78371 |
| $\tau$ |      | $v_4$    |    | $s$   |    | $t$   |
| 000    | -1   | 52083    | -0 | 25000 | -0 | 50000 |
| 001    | -1   | 51083    | -0 | 24936 | -0 | 49981 |
| 003    | -1   | 49651    | -0 | 24837 | -0 | 49944 |
| 010    | -1   | 46024    | -0 | 24564 | -0 | 49810 |
| 020    | -1   | 42252    | -0 | 24247 | -0 | 49619 |
| 050    | -1   | 34596    | -0 | 23488 | -0 | 49042 |
| 100    | -1   | 26679    | -0 | 22495 | -0 | 48081 |
| $\tau$ |      | $u_3$    |    | $u_4$ |    | $u_5$ |
| 000    | -0   | 28125    | -0 | 28125 | 0  | 00000 |
| 001    | -0   | 28229    | -0 | 28279 | 0  | 00038 |
| 003    | -0   | 28371    | -0 | 28520 | 0  | 00113 |
| 010    | -0   | 28711    | -0 | 29202 | 0  | 00378 |
| 020    | -0   | 29044    | -0 | 30011 | 0  | 00760 |
| 050    | -0   | 29656    | -0 | 31992 | 0  | 01914 |
| 100    | -0   | 30164    | -0 | 34628 | 0  | 03836 |
| $\tau$ |      | $a$      |    | $b$   |    | $c$   |
| 000    | 0    | 50000    | 0  | 50000 | -0 | 37500 |
| 001    | 0    | 49744    | 0  | 49853 | -0 | 37559 |
| 003    | 0    | 49354    | 0  | 49621 | -0 | 37632 |
| 010    | 0    | 48292    | 0  | 48961 | -0 | 37779 |
| 020    | 0    | 47088    | 0  | 48180 | -0 | 37885 |
| 050    | 0    | 44340    | 0  | 46291 | -0 | 37933 |
| 100    | 0    | 41013    | 0  | 43832 | -0 | 37667 |
| $\tau$ |      | $Q$      |    | $q$   |    | $s$   |
| 000    |      | $\infty$ | 1  | 33333 | 0  | 00000 |
| 001    | 1002 | 39       | 1  | 32145 | 0  | 00100 |
| 003    | 335  | 31       | 1  | 30425 | 0  | 00279 |
| 010    | 101  | 54       | 1  | 25997 | 0  | 00972 |
| 020    | 51   | 30       | 1  | 21283 | 0  | 01904 |
| 050    | 20   | 99       | 1  | 11347 | 0  | 04518 |
| 100    | 10   | 76       | 1  | 00411 | 0  | 08420 |



Table 5. Intensities

Intensities in the direction normal ( $I_r$ ) and parallel ( $I_\ell$ ) to the sun vertical and their correction for the ground reflection ( $I_r^*$ ,  $I_\ell^*$ ) along the sun vertical for different sun elevations

$$I_r = \frac{3}{32} \frac{\mu_0}{\mu - \mu_0} \{ K\sigma(\mu) + L\theta(\mu) - M\chi(\mu) - N\zeta(\mu) + H \}$$

$$\left. \begin{array}{l} I_\ell \\ I_{\ell a} \end{array} \right\} = \frac{3}{32} \frac{\mu_0}{\mu - \mu_0} \{ K\xi(\mu) + L\eta(\mu) - M\psi(\mu) - N\phi(\mu) \pm \mu\sqrt{1-\mu^2} G - \mu^2 H \}$$

(The upper sign applied to  $I_\ell$ ; the lower sign to  $I_{\ell a}$ .)

$$I_r^* = \frac{\lambda}{4(1-\lambda s)} \mu_0 [\gamma_\ell(\mu_0) + \gamma_r(\mu_0)] [1 - \gamma_r(\mu)]$$

$$I_\ell^* = \frac{\lambda}{4(1-\lambda s)} \mu_0 [\gamma_\ell(\mu_0) + \gamma_r(\mu_0)] [1 - \gamma_\ell(\mu)]$$

where

$$K = \psi(\mu_0) + \chi(\mu_0), \quad L = 2\phi(\mu_0) + 2\zeta(\mu_0),$$

$$M = \xi(\mu_0) + \sigma(\mu_0), \quad N = 2\phi(\mu_0) + 2\eta(\mu_0)$$

$$G = 4\mu_0 \sqrt{1-\mu_0^2} \left\{ X^{(1)}(\mu_0) Y^{(1)}(\mu) - Y^{(1)}(\mu_0) X^{(1)}(\mu) \right\}$$

$$H = (1 - \mu_0^2) \left\{ X^{(2)}(\mu_0) Y^{(2)}(\mu) - Y^{(2)}(\mu_0) X^{(2)}(\mu) \right\}$$

( $\lambda$  - albedo of the ground, reflecting according to Lambert's law.)  
For detailed discussion see the Introduction.

TABLE 5 Intensities

| $\tau$ | $\mu_0$ | $\mu$ | $I_\ell$ | $I_{\ell a}$ | $I_r$ |
|--------|---------|-------|----------|--------------|-------|
| 010    | 002     | 000   | 11860    | 11860        | 11610 |
| 010    | 002     | 002   | 06000    | 06000        | 05900 |
| 010    | 002     | 004   | 03353    | 03342        | 03290 |
| 010    | 002     | 006   | 02332    | 02321        | 02291 |
| 010    | 002     | 008   | 01784    | 01773        | 01756 |
| 010    | 002     | 010   | 01442    | 01431        | 01424 |
| 010    | 002     | 012   | 01208    | 01197        | 01197 |
| 010    | 002     | 020   | 00721    | 00709        | 00731 |
| 010    | 002     | 040   | 00323    | 00312        | 00370 |
| 010    | 002     | 060   | 00167    | 00157        | 00248 |
| 010    | 002     | 080   | 00072    | 00065        | 00186 |
| 010    | 002     | 090   | 00035    | 00030        | 00165 |
| 010    | 002     | 094   | 00021    | 00017        | 00158 |
| 010    | 002     | 098   | 00008    | 00005        | 00152 |
| 010    | 002     | 100   | 00000    | 00000        | 00149 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_l$ | $I_{l_a}$ | $I_r$ |
|--------|---------|-------|-------|-----------|-------|
| 010    | 010     | 006   | 02835 | 02768     | 02786 |
| 010    | 010     | 008   | 02173 | 02105     | 02133 |
| 010    | 010     | 010   | 01761 | 01698     | 01735 |
| 010    | 010     | 012   | 01479 | 01410     | 01452 |
| 010    | 010     | 014   | 01273 | 01204     | 01252 |
| 010    | 010     | 016   | 01117 | 01047     | 01100 |
| 010    | 010     | 018   | 00993 | 00924     | 00981 |
| 010    | 010     | 020   | 00893 | 00824     | 00885 |
| 010    | 010     | 040   | 00414 | 00348     | 00448 |
| 010    | 010     | 060   | 00224 | 00166     | 00300 |
| 010    | 010     | 080   | 00105 | 00062     | 00225 |
| 010    | 010     | 090   | 00056 | 00025     | 00200 |
| 010    | 010     | 094   | 00037 | 00012     | 00192 |
| 010    | 010     | 098   | 00017 | 00002     | 00184 |
| 010    | 010     | 100   | 00002 | 00002     | 00180 |
| 010    | 020     | 006   | 02854 | 02719     | 02858 |
| 010    | 020     | 010   | 01786 | 01648     | 01772 |
| 010    | 020     | 014   | 01302 | 01162     | 01283 |
| 010    | 020     | 018   | 01024 | 00884     | 01006 |
| 010    | 020     | 020   | 00925 | 00784     | 00909 |
| 010    | 020     | 024   | 00772 | 00633     | 00760 |
| 010    | 020     | 028   | 00660 | 00522     | 00653 |
| 010    | 020     | 032   | 00574 | 00437     | 00573 |
| 010    | 020     | 040   | 00447 | 00315     | 00459 |
| 010    | 020     | 060   | 00255 | 00139     | 00307 |
| 010    | 020     | 080   | 00131 | 00044     | 00231 |
| 010    | 020     | 090   | 00077 | 00014     | 00205 |
| 010    | 020     | 094   | 00055 | 00005     | 00197 |
| 010    | 020     | 098   | 00030 | 00001     | 00189 |
| 010    | 020     | 100   | 00008 | 00008     | 00185 |
| 010    | 040     | 006   | 02599 | 02344     | 02896 |
| 010    | 040     | 010   | 01655 | 01393     | 01795 |
| 010    | 040     | 020   | 00894 | 00629     | 00920 |
| 010    | 040     | 028   | 00661 | 00400     | 00662 |
| 010    | 040     | 032   | 00585 | 00326     | 00580 |
| 010    | 040     | 036   | 00523 | 00268     | 00516 |
| 010    | 040     | 040   | 00476 | 00225     | 00470 |
| 010    | 040     | 044   | 00429 | 00183     | 00424 |
| 010    | 040     | 052   | 00357 | 00123     | 00359 |
| 010    | 040     | 060   | 00299 | 00079     | 00311 |
| 010    | 040     | 080   | 00179 | 00014     | 00234 |
| 010    | 040     | 090   | 00121 | 00001     | 00208 |
| 010    | 040     | 094   | 00096 | 00001     | 00199 |
| 010    | 040     | 098   | 00064 | 00009     | 00191 |
| 010    | 040     | 100   | 00030 | 00030     | 00187 |

TABLE 5 Intensities (continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_{\ell}$ | $I_{\ell a}$ | $I_r$ |
|--------|---------|-------|------------|--------------|-------|
| 010    | 060     | 006   | 03062      | 01727        | 02910 |
| 010    | 060     | 010   | 01344      | 00999        | 01804 |
| 010    | 060     | 020   | 01766      | 00418        | 00924 |
| 010    | 060     | 040   | 01448      | 00118        | 00468 |
| 010    | 060     | 052   | 01361      | 00053        | 00361 |
| 010    | 060     | 056   | 01336      | 00038        | 00335 |
| 010    | 060     | 060   | 01317      | 00028        | 00314 |
| 010    | 060     | 064   | 01296      | 00018        | 00293 |
| 010    | 060     | 068   | 01276      | 00010        | 00276 |
| 010    | 060     | 072   | 01257      | 00005        | 00261 |
| 010    | 060     | 080   | 01218      | 00001        | 00235 |
| 010    | 060     | 090   | 01166      | 00008        | 00209 |
| 010    | 060     | 094   | 01141      | 00017        | 00200 |
| 010    | 060     | 098   | 01108      | 00036        | 00192 |
| 010    | 060     | 100   | 01068      | 00068        | 00188 |
| 010    | 080     | 006   | 01243      | 00907        | 02919 |
| 010    | 080     | 010   | 01842      | 00496        | 01809 |
| 010    | 080     | 020   | 01525      | 00176        | 00927 |
| 010    | 080     | 040   | 01358      | 00027        | 00469 |
| 010    | 080     | 060   | 01291      | 00001        | 00314 |
| 010    | 080     | 068   | 01270      | 00004        | 00277 |
| 010    | 080     | 072   | 01259      | 00007        | 00262 |
| 010    | 080     | 076   | 00248      | 00012        | 00248 |
| 010    | 080     | 080   | 00236      | 00020        | 00236 |
| 010    | 080     | 084   | 01224      | 00027        | 00225 |
| 010    | 080     | 088   | 01211      | 00038        | 00214 |
| 010    | 080     | 090   | 00203      | 00044        | 00210 |
| 010    | 080     | 094   | 00184      | 00060        | 00201 |
| 010    | 080     | 098   | 01158      | 00085        | 00193 |
| 010    | 080     | 100   | 00121      | 00121        | 00189 |
| 010    | 090     | 006   | 01712      | 00438        | 02923 |
| 010    | 090     | 010   | 01505      | 00222        | 01812 |
| 010    | 090     | 020   | 01346      | 00060        | 00928 |
| 010    | 090     | 040   | 01273      | 00002        | 00470 |
| 010    | 090     | 060   | 00249      | 00012        | 00314 |
| 010    | 090     | 080   | 01228      | 00050        | 00236 |
| 010    | 090     | 084   | 01222      | 00061        | 00225 |
| 010    | 090     | 088   | 00215      | 00073        | 00215 |
| 010    | 090     | 090   | 00210      | 00081        | 00210 |
| 010    | 090     | 092   | 00205      | 00089        | 00205 |
| 010    | 090     | 094   | 00199      | 00098        | 00201 |
| 010    | 090     | 096   | 00192      | 00108        | 00197 |
| 010    | 090     | 098   | 00181      | 00122        | 00193 |
| 010    | 090     | 100   | 00153      | 00153        | 00189 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I$   | $I_{\theta}$ | $I_r$ |
|--------|---------|-------|-------|--------------|-------|
| 010    | 094     | 006   | 00471 | 00246        | 02925 |
| 010    | 094     | 010   | 00347 | 00115        | 01813 |
| 010    | 094     | 020   | 00256 | 00023        | 00929 |
| 010    | 094     | 040   | 00224 | 00003        | 00470 |
| 010    | 094     | 060   | 00221 | 00027        | 00314 |
| 010    | 094     | 080   | 00216 | 00071        | 00236 |
| 010    | 094     | 084   | 00214 | 00082        | 00225 |
| 010    | 094     | 088   | 00210 | 00095        | 00215 |
| 010    | 094     | 090   | 00208 | 00102        | 00210 |
| 010    | 094     | 092   | 00205 | 00110        | 00206 |
| 010    | 094     | 094   | 00200 | 00119        | 00202 |
| 010    | 094     | 096   | 00196 | 00128        | 00197 |
| 010    | 094     | 098   | 00189 | 00140        | 00193 |
| 010    | 094     | 100   | 00167 | 00167        | 00189 |
| 010    | 098     | 006   | 00201 | 00064        | 02926 |
| 010    | 098     | 010   | 00163 | 00022        | 01814 |
| 010    | 098     | 020   | 00144 | 00002        | 00929 |
| 010    | 098     | 040   | 00156 | 00021        | 00470 |
| 010    | 098     | 060   | 00176 | 00058        | 00315 |
| 010    | 098     | 080   | 00193 | 00104        | 00236 |
| 010    | 098     | 084   | 00195 | 00115        | 00225 |
| 010    | 098     | 088   | 00197 | 00127        | 00215 |
| 010    | 098     | 090   | 00197 | 00133        | 00210 |
| 010    | 098     | 092   | 00197 | 00139        | 00206 |
| 010    | 098     | 094   | 00197 | 00146        | 00201 |
| 010    | 098     | 096   | 00196 | 00154        | 00197 |
| 010    | 098     | 098   | 00189 | 00168        | 00193 |
| 010    | 098     | 100   | 00182 | 00182        | 00189 |
| 010    | 100     | 006   | 00016 | 00016        | 02927 |
| 010    | 100     | 010   | 00021 | 00021        | 01814 |
| 010    | 100     | 020   | 00038 | 00038        | 00930 |
| 010    | 100     | 040   | 00076 | 00076        | 00470 |
| 010    | 100     | 060   | 00113 | 00113        | 00315 |
| 010    | 100     | 080   | 00151 | 00151        | 00236 |
| 010    | 100     | 084   | 00159 | 00159        | 00225 |
| 010    | 100     | 088   | 00166 | 00166        | 00215 |
| 010    | 100     | 090   | 00170 | 00170        | 00210 |
| 010    | 100     | 092   | 00174 | 00174        | 00206 |
| 010    | 100     | 094   | 00178 | 00178        | 00201 |
| 010    | 100     | 096   | 00182 | 00182        | 00197 |
| 010    | 100     | 098   | 00185 | 00185        | 00193 |
| 010    | 100     | 100   | 00188 | 00188        | 00189 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_l$ | $I_{2a}$ | $I_r$ |
|--------|---------|-------|-------|----------|-------|
| 020    | 002     | 000   | 07560 | 07560    | 07240 |
| 020    | 002     | 002   | 07700 | 07700    | 07400 |
| 020    | 002     | 004   | 04784 | 04769    | 04629 |
| 020    | 002     | 006   | 03487 | 03471    | 03380 |
| 020    | 002     | 008   | 02734 | 02717    | 02655 |
| 020    | 002     | 010   | 02243 | 02225    | 02185 |
| 020    | 002     | 012   | 01897 | 01880    | 01855 |
| 020    | 002     | 020   | 01155 | 01137    | 01156 |
| 020    | 002     | 040   | 00525 | 00508    | 00595 |
| 020    | 002     | 060   | 00273 | 00258    | 00400 |
| 020    | 002     | 080   | 00119 | 00108    | 00301 |
| 020    | 002     | 090   | 00059 | 00050    | 00268 |
| 020    | 002     | 094   | 00036 | 00029    | 00257 |
| 020    | 002     | 098   | 00014 | 00010    | 00247 |
| 020    | 002     | 100   | 00002 | 00002    | 00242 |
| 020    | 010     | 006   | 03106 | 04987    | 04952 |
| 020    | 010     | 008   | 03994 | 03871    | 03869 |
| 020    | 010     | 010   | 03280 | 03154    | 03172 |
| 020    | 010     | 012   | 02776 | 02648    | 02689 |
| 020    | 010     | 014   | 02405 | 02276    | 02333 |
| 020    | 010     | 016   | 02119 | 01989    | 02060 |
| 020    | 010     | 018   | 01891 | 01761    | 01844 |
| 020    | 010     | 020   | 01705 | 01575    | 01669 |
| 020    | 010     | 040   | 00801 | 00676    | 00856 |
| 020    | 010     | 060   | 00436 | 00326    | 00575 |
| 020    | 010     | 080   | 00206 | 00123    | 00433 |
| 020    | 010     | 090   | 00111 | 00050    | 00386 |
| 020    | 010     | 094   | 00073 | 00026    | 00370 |
| 020    | 010     | 098   | 00034 | 00006    | 00355 |
| 020    | 010     | 100   | 00006 | 00006    | 00348 |
| 020    | 020     | 006   | 05277 | 05031    | 05215 |
| 020    | 020     | 010   | 03411 | 03149    | 03338 |
| 020    | 020     | 014   | 02522 | 02255    | 02453 |
| 020    | 020     | 018   | 01999 | 01729    | 01938 |
| 020    | 020     | 020   | 01808 | 01537    | 01754 |
| 020    | 020     | 024   | 01518 | 01248    | 01474 |
| 020    | 020     | 028   | 01303 | 01034    | 01271 |
| 020    | 020     | 032   | 01135 | 00868    | 01117 |
| 020    | 020     | 040   | 00888 | 00628    | 00899 |
| 020    | 020     | 060   | 00510 | 00281    | 00605 |
| 020    | 020     | 080   | 00263 | 00090    | 00456 |
| 020    | 020     | 090   | 00154 | 00029    | 00406 |
| 020    | 020     | 094   | 00109 | 00011    | 00389 |
| 020    | 020     | 098   | 00059 | 00002    | 00373 |
| 020    | 020     | 100   | 00016 | 00016    | 00366 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_0$ | $I_a$ | $I_r$ |
|--------|---------|-------|-------|-------|-------|
| 020    | 040     | 006   | 04872 | 04400 | 05357 |
| 020    | 040     | 010   | 03203 | 02701 | 03428 |
| 020    | 040     | 020   | 01774 | 01255 | 01801 |
| 020    | 040     | 028   | 01322 | 00805 | 01305 |
| 020    | 040     | 032   | 01172 | 00659 | 01147 |
| 020    | 040     | 036   | 01051 | 00544 | 01023 |
| 020    | 040     | 040   | 00948 | 00450 | 00923 |
| 020    | 040     | 044   | 00864 | 00373 | 00841 |
| 020    | 040     | 052   | 00721 | 00252 | 00714 |
| 020    | 040     | 060   | 00604 | 00164 | 00621 |
| 020    | 040     | 080   | 00361 | 00030 | 00468 |
| 020    | 040     | 090   | 00243 | 00003 | 00417 |
| 020    | 040     | 094   | 00190 | 00003 | 00400 |
| 020    | 040     | 098   | 00125 | 00016 | 00384 |
| 020    | 040     | 100   | 00059 | 00059 | 00377 |
| 020    | 060     | 006   | 03886 | 03262 | 05410 |
| 020    | 060     | 010   | 02613 | 01950 | 03461 |
| 020    | 060     | 020   | 01527 | 00841 | 01818 |
| 020    | 060     | 040   | 00905 | 00245 | 00932 |
| 020    | 060     | 052   | 00731 | 00112 | 00721 |
| 020    | 060     | 056   | 00684 | 00082 | 00670 |
| 020    | 060     | 060   | 00641 | 00060 | 00628 |
| 020    | 060     | 064   | 00598 | 00039 | 00587 |
| 020    | 060     | 068   | 00557 | 00024 | 00554 |
| 020    | 060     | 072   | 00518 | 00014 | 00523 |
| 020    | 060     | 080   | 00439 | 00004 | 00472 |
| 020    | 060     | 090   | 00331 | 00016 | 00421 |
| 020    | 060     | 094   | 00279 | 00034 | 00404 |
| 020    | 060     | 098   | 00211 | 00069 | 00389 |
| 020    | 060     | 100   | 00132 | 00132 | 00381 |
| 020    | 080     | 006   | 02351 | 01724 | 05442 |
| 020    | 080     | 010   | 01643 | 00977 | 03481 |
| 020    | 080     | 020   | 01049 | 00359 | 01828 |
| 020    | 080     | 040   | 00723 | 00061 | 00936 |
| 020    | 080     | 060   | 00587 | 00006 | 00628 |
| 020    | 080     | 068   | 00542 | 00011 | 00555 |
| 020    | 080     | 072   | 00520 | 00018 | 00525 |
| 020    | 080     | 076   | 00496 | 00028 | 00496 |
| 020    | 080     | 080   | 00471 | 00043 | 00475 |
| 020    | 080     | 084   | 00446 | 00058 | 00452 |
| 020    | 080     | 088   | 00417 | 00079 | 00432 |
| 020    | 080     | 090   | 00400 | 00092 | 00423 |
| 020    | 080     | 094   | 00362 | 00123 | 00406 |
| 020    | 080     | 098   | 00309 | 00170 | 00390 |
| 020    | 080     | 100   | 00236 | 00236 | 00383 |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_e$ | $I_a$ | $I_r$ |
|--------|---------|-------|-------|-------|-------|
| 020    | 090     | 006   | 01352 | 00840 | 05455 |
| 020    | 090     | 010   | 00988 | 00443 | 03489 |
| 020    | 090     | 020   | 00692 | 00128 | 01831 |
| 020    | 090     | 040   | 00549 | 00009 | 00937 |
| 020    | 090     | 060   | 00500 | 00029 | 00628 |
| 020    | 090     | 080   | 00453 | 00105 | 00473 |
| 020    | 090     | 084   | 00439 | 00128 | 00452 |
| 020    | 090     | 088   | 00423 | 00153 | 00432 |
| 020    | 090     | 090   | 00414 | 00168 | 00422 |
| 020    | 090     | 092   | 00405 | 00184 | 00413 |
| 020    | 090     | 094   | 00393 | 00201 | 00405 |
| 020    | 090     | 096   | 00378 | 00221 | 00397 |
| 020    | 090     | 098   | 00357 | 00247 | 00390 |
| 020    | 090     | 100   | 00305 | 00305 | 00383 |
| 020    | 094     | 006   | 00897 | 00478 | 05460 |
| 020    | 094     | 010   | 00680 | 00234 | 03492 |
| 020    | 094     | 020   | 00512 | 00052 | 01832 |
| 020    | 094     | 040   | 00451 | 00010 | 00937 |
| 020    | 094     | 060   | 00443 | 00059 | 00628 |
| 020    | 094     | 080   | 00430 | 00148 | 00473 |
| 020    | 094     | 084   | 00424 | 00171 | 00451 |
| 020    | 094     | 088   | 00416 | 00197 | 00432 |
| 020    | 094     | 090   | 00411 | 00211 | 00422 |
| 020    | 094     | 092   | 00404 | 00226 | 00414 |
| 020    | 094     | 094   | 00446 | 00244 | 00405 |
| 020    | 094     | 096   | 00389 | 00263 | 00397 |
| 020    | 094     | 098   | 00375 | 00286 | 00389 |
| 020    | 094     | 100   | 00335 | 00335 | 00382 |
| 020    | 098     | 006   | 00388 | 00133 | 05464 |
| 020    | 098     | 010   | 00323 | 00052 | 03494 |
| 020    | 098     | 020   | 00289 | 00009 | 01833 |
| 020    | 098     | 040   | 00313 | 00046 | 00937 |
| 020    | 098     | 060   | 00352 | 00120 | 00628 |
| 020    | 098     | 080   | 00384 | 00215 | 00473 |
| 020    | 098     | 084   | 00389 | 00237 | 00451 |
| 020    | 098     | 088   | 00391 | 00260 | 00431 |
| 020    | 098     | 090   | 00392 | 00272 | 00422 |
| 020    | 098     | 092   | 00392 | 00285 | 00413 |
| 020    | 098     | 094   | 00391 | 00299 | 00405 |
| 020    | 098     | 096   | 00389 | 00314 | 00397 |
| 020    | 098     | 098   | 00377 | 00341 | 00389 |
| 020    | 098     | 100   | 00366 | 00366 | 00381 |



TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $u$ | $I_{\ell}$ | $I_{\rho_a}$ | $I_I$ |
|--------|---------|-----|------------|--------------|-------|
| 020    | 100     | 006 | 00041      | 00041        | 05466 |
| 020    | 100     | 010 | 00048      | 00048        | 03495 |
| 020    | 100     | 020 | 00080      | 00080        | 01834 |
| 020    | 100     | 040 | 00153      | 00153        | 00937 |
| 020    | 100     | 060 | 00229      | 00229        | 00628 |
| 020    | 100     | 080 | 00305      | 00305        | 00472 |
| 020    | 100     | 084 | 00320      | 00320        | 00450 |
| 020    | 100     | 088 | 00336      | 00336        | 00430 |
| 020    | 100     | 090 | 00343      | 00343        | 00421 |
| 020    | 100     | 092 | 00351      | 00351        | 00413 |
| 020    | 100     | 094 | 00358      | 00358        | 00404 |
| 020    | 100     | 096 | 00366      | 00366        | 00397 |
| 020    | 100     | 098 | 00373      | 00373        | 00390 |
| 020    | 100     | 100 | 00379      | 00379        | 00381 |
| 050    | 002     | 000 | 02250      | 02250        | 01940 |
| 050    | 002     | 002 | 05500      | 05500        | 04900 |
| 050    | 002     | 004 | 04488      | 04475        | 04177 |
| 050    | 002     | 006 | 03828      | 03810        | 03581 |
| 050    | 002     | 008 | 03259      | 03239        | 03061 |
| 050    | 002     | 010 | 02813      | 02792        | 02652 |
| 050    | 002     | 012 | 02463      | 02441        | 02333 |
| 050    | 002     | 020 | 01609      | 01585        | 01561 |
| 050    | 002     | 040 | 00773      | 00748        | 00848 |
| 050    | 002     | 060 | 00411      | 00389        | 00581 |
| 050    | 002     | 080 | 00184      | 00156        | 00442 |
| 050    | 002     | 090 | 00092      | 00080        | 00395 |
| 050    | 002     | 094 | 00058      | 00049        | 00278 |
| 050    | 002     | 098 | 00025      | 00019        | 00364 |
| 050    | 002     | 100 | 00007      | 00007        | 00356 |
| 050    | 010     | 006 | 09214      | 09006        | 08668 |
| 050    | 010     | 008 | 07641      | 07411        | 07183 |
| 050    | 010     | 010 | 06502      | 06256        | 06114 |
| 050    | 010     | 012 | 05644      | 05391        | 05309 |
| 050    | 010     | 014 | 04979      | 04719        | 04690 |
| 050    | 010     | 016 | 04447      | 04182        | 04199 |
| 050    | 010     | 018 | 04012      | 03743        | 03799 |
| 050    | 010     | 020 | 03649      | 03377        | 03469 |
| 050    | 010     | 040 | 01783      | 01512        | 01852 |
| 050    | 010     | 060 | 00986      | 00743        | 01262 |
| 050    | 010     | 080 | 00473      | 00290        | 00957 |
| 050    | 010     | 090 | 00259      | 00125        | 00854 |
| 050    | 010     | 094 | 00175      | 00070        | 00818 |
| 050    | 010     | 098 | 00056      | 00025        | 00766 |
| 050    | 010     | 100 | 00023      | 00023        | 00770 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_p$  | $I_{\lambda}$ | $I_r$  |
|--------|---------|-------|--------|---------------|--------|
| 0.50   | 0.20    | 0.06  | 1.0327 | 0.9859        | 0.9909 |
| 0.50   | 0.20    | 0.10  | 0.7297 | 0.6753        | 0.6941 |
| 0.50   | 0.20    | 0.14  | 0.5617 | 0.5037        | 0.5312 |
| 0.50   | 0.20    | 0.18  | 0.4555 | 0.3956        | 0.4297 |
| 0.50   | 0.20    | 0.20  | 0.4157 | 0.3551        | 0.3921 |
| 0.50   | 0.20    | 0.24  | 0.3529 | 0.2917        | 0.3336 |
| 0.50   | 0.20    | 0.28  | 0.3054 | 0.2439        | 0.2903 |
| 0.50   | 0.20    | 0.32  | 0.2678 | 0.2064        | 0.2569 |
| 0.50   | 0.20    | 0.40  | 0.2113 | 0.1510        | 0.2088 |
| 0.50   | 0.20    | 0.60  | 0.1229 | 0.0691        | 0.1422 |
| 0.50   | 0.20    | 0.80  | 0.0641 | 0.0234        | 0.1077 |
| 0.50   | 0.20    | 0.90  | 0.0382 | 0.0085        | 0.0961 |
| 0.50   | 0.20    | 0.94  | 0.0275 | 0.0042        | 0.0921 |
| 0.50   | 0.20    | 0.98  | 0.0155 | 0.0019        | 0.0885 |
| 0.50   | 0.20    | 1.00  | 0.0052 | 0.0052        | 0.0867 |
| 0.50   | 0.40    | 0.06  | 0.9943 | 0.9005        | 1.0628 |
| 0.50   | 0.40    | 0.10  | 0.7123 | 0.6036        | 0.7420 |
| 0.50   | 0.40    | 0.20  | 0.4221 | 0.3014        | 0.4181 |
| 0.50   | 0.40    | 0.28  | 0.3203 | 0.1979        | 0.3093 |
| 0.50   | 0.40    | 0.32  | 0.2856 | 0.1635        | 0.2737 |
| 0.50   | 0.40    | 0.36  | 0.2572 | 0.1359        | 0.2454 |
| 0.50   | 0.40    | 0.40  | 0.2334 | 0.1132        | 0.2225 |
| 0.50   | 0.40    | 0.44  | 0.2127 | 0.0944        | 0.2033 |
| 0.50   | 0.40    | 0.52  | 0.1783 | 0.0648        | 0.1735 |
| 0.50   | 0.40    | 0.60  | 0.1498 | 0.0428        | 0.1513 |
| 0.50   | 0.40    | 0.80  | 0.0905 | 0.0094        | 0.1147 |
| 0.50   | 0.40    | 0.90  | 0.0617 | 0.0026        | 0.1023 |
| 0.50   | 0.40    | 0.94  | 0.0488 | 0.0025        | 0.0981 |
| 0.50   | 0.40    | 0.98  | 0.0330 | 0.0059        | 0.0942 |
| 0.50   | 0.40    | 1.00  | 0.0164 | 0.0164        | 0.0923 |
| 0.50   | 0.60    | 0.06  | 0.8050 | 0.6795        | 1.0900 |
| 0.50   | 0.60    | 0.10  | 0.5889 | 0.4434        | 0.7602 |
| 0.50   | 0.60    | 0.20  | 0.3673 | 0.2059        | 0.4280 |
| 0.50   | 0.60    | 0.40  | 0.2242 | 0.0637        | 0.2275 |
| 0.50   | 0.60    | 0.52  | 0.1822 | 0.0304        | 0.1775 |
| 0.50   | 0.60    | 0.56  | 0.1707 | 0.0230        | 0.1654 |
| 0.50   | 0.60    | 0.60  | 0.1601 | 0.0169        | 0.1548 |
| 0.50   | 0.60    | 0.64  | 0.1498 | 0.0121        | 0.1455 |
| 0.50   | 0.60    | 0.68  | 0.1400 | 0.0082        | 0.1373 |
| 0.50   | 0.60    | 0.72  | 0.1304 | 0.0054        | 0.1299 |
| 0.50   | 0.60    | 0.80  | 0.1111 | 0.0027        | 0.1173 |
| 0.50   | 0.60    | 0.90  | 0.0848 | 0.0058        | 0.1047 |
| 0.50   | 0.60    | 0.94  | 0.0721 | 0.0102        | 0.1003 |
| 0.50   | 0.60    | 0.98  | 0.0553 | 0.0192        | 0.0963 |
| 0.50   | 0.60    | 1.00  | 0.0354 | 0.0354        | 0.0944 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_\ell$ | $I_{\ell a}$ | $I_r$  |
|--------|---------|-------|----------|--------------|--------|
| 0.50   | 0.80    | 0.06  | 0.4925   | 0.3655       | 1.1061 |
| 0.50   | 0.80    | 0.10  | 0.3738   | 0.2267       | 0.7710 |
| 0.50   | 0.80    | 0.20  | 0.2539   | 0.0908       | 0.4339 |
| 0.50   | 0.80    | 0.40  | 0.1799   | 0.0177       | 0.2306 |
| 0.50   | 0.80    | 0.60  | 0.1477   | 0.0032       | 0.1569 |
| 0.50   | 0.80    | 0.68  | 0.1372   | 0.0041       | 0.1391 |
| 0.50   | 0.80    | 0.72  | 0.1319   | 0.0057       | 0.1317 |
| 0.50   | 0.80    | 0.76  | 0.1254   | 0.0080       | 0.1250 |
| 0.50   | 0.80    | 0.80  | 0.1204   | 0.0116       | 0.1192 |
| 0.50   | 0.80    | 0.84  | 0.1144   | 0.0152       | 0.1134 |
| 0.50   | 0.80    | 0.88  | 0.1074   | 0.0204       | 0.1084 |
| 0.50   | 0.80    | 0.90  | 0.1034   | 0.0236       | 0.1061 |
| 0.50   | 0.80    | 0.94  | 0.0941   | 0.0315       | 0.1017 |
| 0.50   | 0.80    | 0.98  | 0.0806   | 0.0410       | 0.0976 |
| 0.50   | 0.80    | 1.00  | 0.0621   | 0.0621       | 0.0957 |
| 0.50   | 0.90    | 0.06  | 0.2866   | 0.1824       | 1.1125 |
| 0.50   | 0.90    | 0.10  | 0.2267   | 0.1060       | 0.7753 |
| 0.50   | 0.90    | 0.20  | 0.1684   | 0.0346       | 0.4363 |
| 0.50   | 0.90    | 0.40  | 0.1373   | 0.0042       | 0.2319 |
| 0.50   | 0.90    | 0.60  | 0.1265   | 0.0080       | 0.1578 |
| 0.50   | 0.90    | 0.80  | 0.1161   | 0.0263       | 0.1195 |
| 0.50   | 0.90    | 0.84  | 0.1131   | 0.0316       | 0.1140 |
| 0.50   | 0.90    | 0.88  | 0.1095   | 0.0382       | 0.1090 |
| 0.50   | 0.90    | 0.90  | 0.1071   | 0.0420       | 0.1067 |
| 0.50   | 0.90    | 0.92  | 0.1047   | 0.0458       | 0.1044 |
| 0.50   | 0.90    | 0.94  | 0.1016   | 0.0503       | 0.1022 |
| 0.50   | 0.90    | 0.96  | 0.0978   | 0.0557       | 0.1001 |
| 0.50   | 0.90    | 0.98  | 0.0925   | 0.0625       | 0.0981 |
| 0.50   | 0.90    | 1.00  | 0.0783   | 0.0783       | 0.0962 |
| 0.50   | 0.94    | 0.06  | 0.1924   | 0.1071       | 1.1148 |
| 0.50   | 0.94    | 0.10  | 0.1575   | 0.0587       | 0.7769 |
| 0.50   | 0.94    | 0.20  | 0.1254   | 0.0152       | 0.4372 |
| 0.50   | 0.94    | 0.40  | 0.1129   | 0.0041       | 0.2323 |
| 0.50   | 0.94    | 0.60  | 0.1121   | 0.0151       | 0.1581 |
| 0.50   | 0.94    | 0.80  | 0.1103   | 0.0368       | 0.1198 |
| 0.50   | 0.94    | 0.84  | 0.1091   | 0.0425       | 0.1148 |
| 0.50   | 0.94    | 0.88  | 0.1073   | 0.0489       | 0.1092 |
| 0.50   | 0.94    | 0.90  | 0.1061   | 0.0513       | 0.1068 |
| 0.50   | 0.94    | 0.92  | 0.1046   | 0.0564       | 0.1046 |
| 0.50   | 0.94    | 0.94  | 0.1023   | 0.0560       | 0.1024 |
| 0.50   | 0.94    | 0.96  | 0.1001   | 0.0631       | 0.1003 |
| 0.50   | 0.94    | 0.98  | 0.0964   | 0.0719       | 0.0983 |
| 0.50   | 0.94    | 1.00  | 0.0854   | 0.0854       | 0.0962 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_L$ | $I_a$ | $I_r$ |
|--------|---------|-------|-------|-------|-------|
| 0.50   | 0.98    | 0.06  | 00871 | 00351 | 11171 |
| 0.50   | 0.98    | 0.10  | 00771 | 00170 | 07784 |
| 0.50   | 0.98    | 0.20  | 00717 | 00050 | 04380 |
| 0.50   | 0.98    | 0.40  | 00788 | 00126 | 02328 |
| 0.50   | 0.98    | 0.60  | 00894 | 00303 | 01584 |
| 0.50   | 0.98    | 0.80  | 00983 | 00535 | 01200 |
| 0.50   | 0.98    | 0.84  | 00995 | 00590 | 01145 |
| 0.50   | 0.98    | 0.88  | 01003 | 00648 | 01094 |
| 0.50   | 0.98    | 0.90  | 01006 | 00679 | 01070 |
| 0.50   | 0.98    | 0.92  | 01006 | 00713 | 01048 |
| 0.50   | 0.98    | 0.94  | 01004 | 00748 | 01026 |
| 0.50   | 0.98    | 0.96  | 00998 | 00788 | 01005 |
| 0.50   | 0.98    | 0.98  | 00962 | 00857 | 00985 |
| 0.50   | 0.98    | 1.00  | 00927 | 00927 | 00966 |
| 0.50   | 1.00    | 0.06  | 00153 | 00153 | 11182 |
| 0.50   | 1.00    | 0.10  | 00155 | 00155 | 07792 |
| 0.50   | 1.00    | 0.20  | 00217 | 00217 | 04384 |
| 0.50   | 1.00    | 0.40  | 00391 | 00391 | 02330 |
| 0.50   | 1.00    | 0.60  | 00579 | 00579 | 01585 |
| 0.50   | 1.00    | 0.80  | 00771 | 00771 | 01201 |
| 0.50   | 1.00    | 0.84  | 00810 | 00810 | 01146 |
| 0.50   | 1.00    | 0.88  | 00849 | 00849 | 01095 |
| 0.50   | 1.00    | 0.90  | 00868 | 00868 | 01071 |
| 0.50   | 1.00    | 0.92  | 00888 | 00888 | 01049 |
| 0.50   | 1.00    | 0.94  | 00907 | 00907 | 01027 |
| 0.50   | 1.00    | 0.96  | 00926 | 00926 | 01006 |
| 0.50   | 1.00    | 0.98  | 00946 | 00946 | 00986 |
| 0.50   | 1.00    | 1.00  | 00965 | 00965 | 00966 |
| 1.00   | 0.02    | 0.00  | 00700 | 00700 | 00481 |
| 1.00   | 0.02    | 0.02  | 01300 | 01300 | 01100 |
| 1.00   | 0.02    | 0.04  | 02105 | 02099 | 01805 |
| 1.00   | 0.02    | 0.06  | 02348 | 02338 | 02067 |
| 1.00   | 0.02    | 0.08  | 02322 | 02309 | 02071 |
| 1.00   | 0.02    | 0.10  | 02203 | 02187 | 01982 |
| 1.00   | 0.02    | 0.12  | 02058 | 02041 | 01865 |
| 1.00   | 0.02    | 0.20  | 01537 | 01514 | 01434 |
| 1.00   | 0.02    | 0.40  | 00820 | 00794 | 00867 |
| 1.00   | 0.02    | 0.60  | 00453 | 00430 | 00616 |
| 1.00   | 0.02    | 0.80  | 00209 | 00191 | 00477 |
| 1.00   | 0.02    | 0.90  | 00109 | 00095 | 00428 |
| 1.00   | 0.02    | 0.94  | 00071 | 00061 | 00412 |
| 1.00   | 0.02    | 0.98  | 00034 | 00028 | 00396 |
| 1.00   | 0.02    | 1.00  | 00014 | 00014 | 00389 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_\ell$ | $I_{\ell a}$ | $I_r$ |
|--------|---------|-------|----------|--------------|-------|
| 100    | 010     | 006   | 10661    | 10431        | 09636 |
| 100    | 010     | 008   | 09653    | 09375        | 08732 |
| 100    | 010     | 010   | 08699    | 08385        | 07874 |
| 100    | 010     | 012   | 07870    | 07530        | 07134 |
| 100    | 010     | 014   | 07155    | 06795        | 06498 |
| 100    | 010     | 016   | 06540    | 06164        | 05956 |
| 100    | 010     | 018   | 06010    | 05621        | 05491 |
| 100    | 010     | 020   | 05548    | 05149        | 05090 |
| 100    | 010     | 040   | 02908    | 02481        | 02915 |
| 100    | 010     | 060   | 01651    | 01260        | 02035 |
| 100    | 010     | 080   | 00810    | 00510        | 01563 |
| 100    | 010     | 090   | 00453    | 00233        | 01400 |
| 100    | 010     | 094   | 00312    | 00140        | 01344 |
| 100    | 010     | 098   | 00164    | 00063        | 01292 |
| 100    | 010     | 100   | 00059    | 00059        | 01268 |
| 100    | 020     | 006   | 13795    | 13193        | 12762 |
| 100    | 020     | 010   | 11092    | 10294        | 10185 |
| 100    | 020     | 014   | 09097    | 08190        | 08312 |
| 100    | 020     | 018   | 07657    | 06684        | 06982 |
| 100    | 020     | 020   | 07084    | 06088        | 06461 |
| 100    | 020     | 024   | 06136    | 05107        | 05611 |
| 100    | 020     | 028   | 05387    | 04339        | 04956 |
| 100    | 020     | 032   | 04777    | 03719        | 04436 |
| 100    | 020     | 040   | 03830    | 02773        | 03665 |
| 100    | 020     | 060   | 02279    | 01315        | 02551 |
| 100    | 020     | 080   | 01209    | 00470        | 01956 |
| 100    | 020     | 040   | 00729    | 00188        | 01751 |
| 100    | 020     | 094   | 00531    | 00107        | 01681 |
| 100    | 020     | 098   | 00309    | 00061        | 01616 |
| 100    | 020     | 100   | 00120    | 00120        | 01585 |
| 100    | 040     | 006   | 14359    | 13055        | 14822 |
| 100    | 040     | 010   | 11606    | 09897        | 11689 |
| 100    | 040     | 020   | 07647    | 05532        | 07344 |
| 100    | 040     | 028   | 05993    | 03773        | 05620 |
| 100    | 040     | 032   | 05398    | 03158        | 05027 |
| 100    | 040     | 036   | 04900    | 02656        | 04545 |
| 100    | 040     | 040   | 04474    | 02235        | 04147 |
| 100    | 040     | 044   | 04097    | 01882        | 03813 |
| 100    | 040     | 052   | 03461    | 01317        | 03284 |
| 100    | 040     | 060   | 02924    | 00890        | 02883 |
| 100    | 040     | 080   | 01786    | 00227        | 02208 |
| 100    | 040     | 090   | 01224    | 00084        | 01976 |
| 100    | 040     | 094   | 00972    | 00078        | 01897 |
| 100    | 040     | 098   | 00663    | 00141        | 01823 |
| 100    | 040     | 100   | 00342    | 00342        | 01789 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_0$ | $I_a$ | $I_r$ |
|--------|---------|-------|-------|-------|-------|
| 100    | 0.60    | 0.06  | 11967 | 10171 | 15636 |
| 100    | 0.60    | 0.10  | 09840 | 07496 | 12283 |
| 100    | 0.60    | 0.20  | 06798 | 03906 | 07693 |
| 100    | 0.60    | 0.40  | 04373 | 01322 | 04338 |
| 100    | 0.60    | 0.52  | 03593 | 00667 | 03433 |
| 100    | 0.60    | 0.56  | 03376 | 00518 | 03210 |
| 100    | 0.60    | 0.60  | 03170 | 00395 | 03014 |
| 100    | 0.60    | 0.64  | 02974 | 00294 | 02840 |
| 100    | 0.60    | 0.68  | 02783 | 00215 | 02685 |
| 100    | 0.60    | 0.72  | 02596 | 00155 | 02546 |
| 100    | 0.60    | 0.80  | 02218 | 00093 | 02307 |
| 100    | 0.60    | 0.90  | 01698 | 00143 | 02065 |
| 100    | 0.60    | 0.94  | 01446 | 00226 | 01982 |
| 100    | 0.60    | 0.98  | 01113 | 00400 | 01905 |
| 100    | 0.60    | 1.00  | 00718 | 00718 | 01869 |
| 100    | 0.80    | 0.06  | 07480 | 05638 | 16108 |
| 100    | 0.80    | 0.10  | 06361 | 03961 | 12630 |
| 100    | 0.80    | 0.20  | 04762 | 01806 | 07898 |
| 100    | 0.80    | 0.40  | 03538 | 00422 | 04450 |
| 100    | 0.80    | 0.60  | 02944 | 00110 | 03090 |
| 100    | 0.80    | 0.68  | 02742 | 00119 | 02753 |
| 100    | 0.80    | 0.72  | 02639 | 00146 | 02610 |
| 100    | 0.80    | 0.76  | 02532 | 00189 | 02482 |
| 100    | 0.80    | 0.80  | 02418 | 00248 | 02366 |
| 100    | 0.80    | 0.84  | 02294 | 00326 | 02259 |
| 100    | 0.80    | 0.88  | 02154 | 00427 | 02162 |
| 100    | 0.80    | 0.90  | 02076 | 00488 | 02117 |
| 100    | 0.80    | 0.94  | 01890 | 00645 | 02032 |
| 100    | 0.80    | 0.98  | 01619 | 00891 | 01953 |
| 100    | 0.80    | 1.00  | 01250 | 01250 | 01916 |
| 100    | 0.90    | 0.06  | 04441 | 02922 | 16288 |
| 100    | 0.90    | 0.10  | 03920 | 01943 | 12763 |
| 100    | 0.90    | 0.20  | 03188 | 00754 | 07977 |
| 100    | 0.90    | 0.40  | 02709 | 00144 | 04493 |
| 100    | 0.90    | 0.60  | 02525 | 00193 | 03120 |
| 100    | 0.90    | 0.80  | 02329 | 00543 | 02388 |
| 100    | 0.90    | 0.84  | 02270 | 00650 | 02281 |
| 100    | 0.90    | 0.88  | 02197 | 00775 | 02183 |
| 100    | 0.90    | 0.90  | 02150 | 00851 | 02138 |
| 100    | 0.90    | 0.92  | 02103 | 00927 | 02093 |
| 100    | 0.90    | 0.94  | 02042 | 01017 | 2051  |
| 100    | 0.90    | 0.96  | 01965 | 01123 | 02010 |
| 100    | 0.90    | 0.98  | 01859 | 01260 | 01971 |
| 100    | 0.90    | 1.00  | 01575 | 01575 | 01934 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\mu_0$ | $\mu$ | $I_\theta$ | $I_{\theta_e}$ | $I_r$  |
|--------|---------|-------|------------|----------------|--------|
| 1.00   | 0.94    | 0.0   | 0.2754     | 0.1143         | 1.2811 |
| 1.00   | 0.94    | 0.20  | 0.2393     | 0.0398         | 0.8006 |
| 1.00   | 0.94    | 0.40  | 0.2235     | 0.0133         | 0.4509 |
| 1.00   | 0.94    | 0.60  | 0.2240     | 0.0329         | 0.3131 |
| 1.00   | 0.94    | 0.80  | 0.2212     | 0.0748         | 0.2396 |
| 1.00   | 0.94    | 0.84  | 0.2189     | 0.0861         | 0.2289 |
| 1.00   | 0.94    | 0.88  | 0.2154     | 0.0989         | 0.2191 |
| 1.00   | 0.94    | 0.90  | 0.2130     | 0.1059         | 0.2145 |
| 1.00   | 0.94    | 0.92  | 0.2100     | 0.1137         | 0.2101 |
| 1.00   | 0.94    | 0.94  | 0.2056     | 0.1229         | 0.2059 |
| 1.00   | 0.94    | 0.96  | 0.2012     | 0.1322         | 0.2017 |
| 1.00   | 0.94    | 0.98  | 0.1957     | 0.1446         | 0.1978 |
| 1.00   | 0.94    | 1.00  | 0.1716     | 0.1716         | 0.1941 |
| 1.00   | 0.98    | 0.06  | 0.1473     | 0.0713         | 1.6417 |
| 1.00   | 0.98    | 0.10  | 0.1421     | 0.0433         | 1.2858 |
| 1.00   | 0.98    | 0.20  | 0.1400     | 0.0134         | 0.8034 |
| 1.00   | 0.98    | 0.40  | 0.1570     | 0.0289         | 0.4524 |
| 1.00   | 0.98    | 0.60  | 0.1739     | 0.0622         | 0.3141 |
| 1.00   | 0.98    | 0.80  | 0.1972     | 0.1080         | 0.2404 |
| 1.00   | 0.98    | 0.84  | 0.1997     | 0.1188         | 0.2297 |
| 1.00   | 0.98    | 0.88  | 0.2014     | 0.1304         | 0.2198 |
| 1.00   | 0.98    | 0.90  | 0.2019     | 0.1367         | 0.2152 |
| 1.00   | 0.98    | 0.92  | 0.2021     | 0.1433         | 0.2108 |
| 1.00   | 0.98    | 0.94  | 0.2017     | 0.1505         | 0.2065 |
| 1.00   | 0.98    | 0.96  | 0.2005     | 0.1585         | 0.2024 |
| 1.00   | 0.98    | 0.98  | 0.1934     | 0.1724         | 0.1986 |
| 1.00   | 0.98    | 1.00  | 0.1864     | 0.1864         | 0.1947 |
| 1.00   | 1.00    | 0.06  | 0.0407     | 0.0407         | 1.6447 |
| 1.00   | 1.00    | 0.10  | 0.0396     | 0.0396         | 1.2881 |
| 1.00   | 1.00    | 0.20  | 0.0480     | 0.0480         | 0.8048 |
| 1.00   | 1.00    | 0.40  | 0.0797     | 0.0797         | 0.4532 |
| 1.00   | 1.00    | 0.60  | 0.1166     | 0.1166         | 0.3146 |
| 1.00   | 1.00    | 0.80  | 0.1549     | 0.1549         | 0.2408 |
| 1.00   | 1.00    | 0.84  | 0.1627     | 0.1627         | 0.2300 |
| 1.00   | 1.00    | 0.88  | 0.1705     | 0.1705         | 0.2202 |
| 1.00   | 1.00    | 0.90  | 0.1744     | 0.1744         | 0.2155 |
| 1.00   | 1.00    | 0.92  | 0.1783     | 0.1783         | 0.2111 |
| 1.00   | 1.00    | 0.94  | 0.1822     | 0.1822         | 0.2068 |
| 1.00   | 1.00    | 0.96  | 0.1861     | 0.1861         | 0.2028 |
| 1.00   | 1.00    | 0.98  | 0.1900     | 0.1900         | 0.1988 |
| 1.00   | 1.00    | 1.00  | 0.1939     | 0.1939         | 0.1948 |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_p^*$   | $I_s^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 0 1 0  | 0 2 5     | 0 0 2   | 0 0 2 | 0 0 0 3 9 | 0 0 0 3 9 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 0 4 | 0 0 0 2 2 | 0 0 0 2 2 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 0 6 | 0 0 0 1 5 | 0 0 0 1 5 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 0 8 | 0 0 0 1 1 | 0 0 0 1 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 1 0 | 0 0 0 0 9 | 0 0 0 0 9 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 1 2 | 0 0 0 0 8 | 0 0 0 0 8 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 2 0 | 0 0 0 0 4 | 0 0 0 0 4 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 4 0 | 0 0 0 0 2 | 0 0 0 0 2 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 6 0 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 8 0 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 9 0 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 9 4 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 0 9 8 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 0 2   | 1 0 0 | 0 0 0 0 1 | 0 0 0 0 1 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 0 6 | 0 0 0 9 1 | 0 0 0 9 1 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 0 8 | 0 0 0 7 0 | 0 0 0 7 0 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 1 0 | 0 0 0 5 6 | 0 0 0 5 6 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 1 2 | 0 0 0 4 7 | 0 0 0 4 7 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 1 4 | 0 0 0 4 1 | 0 0 0 4 1 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 1 6 | 0 0 0 3 6 | 0 0 0 3 6 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 1 8 | 0 0 0 3 2 | 0 0 0 3 2 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 2 0 | 0 0 0 2 9 | 0 0 0 2 9 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 4 0 | 0 0 0 1 4 | 0 0 0 1 4 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 6 0 | 0 0 0 0 9 | 0 0 0 0 9 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 8 0 | 0 0 0 0 7 | 0 0 0 0 7 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 9 0 | 0 0 0 0 6 | 0 0 0 0 6 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 9 4 | 0 0 0 0 6 | 0 0 0 0 6 |
| 0 1 0  | 0 2 5     | 0 1 0   | 0 9 8 | 0 0 0 0 6 | 0 0 0 0 6 |
| 0 1 0  | 0 2 5     | 0 1 0   | 1 0 0 | 0 0 0 0 5 | 0 0 0 0 5 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 0 6 | 0 0 1 8 7 | 0 0 1 8 7 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 1 0 | 0 0 1 1 6 | 0 0 1 1 6 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 1 4 | 0 0 0 8 4 | 0 0 0 8 4 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 1 8 | 0 0 0 6 6 | 0 0 0 6 6 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 2 0 | 0 0 0 5 9 | 0 0 0 5 9 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 2 4 | 0 0 0 4 9 | 0 0 0 4 9 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 2 8 | 0 0 0 4 2 | 0 0 0 4 2 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 3 2 | 0 0 0 3 7 | 0 0 0 3 7 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 4 0 | 0 0 0 3 0 | 0 0 0 3 0 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 6 0 | 0 0 0 2 0 | 0 0 0 2 0 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 8 0 | 0 0 0 1 5 | 0 0 0 1 5 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 9 0 | 0 0 0 1 3 | 0 0 0 1 3 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 9 4 | 0 0 0 1 2 | 0 0 0 1 2 |
| 0 1 0  | 0 2 5     | 0 2 0   | 0 9 8 | 0 0 0 1 2 | 0 0 0 1 2 |
| 0 1 0  | 0 2 5     | 0 2 0   | 1 0 0 | 0 0 0 1 2 | 0 0 0 1 2 |



TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_e^*$   | $I_r^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 0 1 0  | 0 2 5     | 0 4 0   | 0 0 6 | 0 0 3 8 0 | 0 0 3 8 0 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 1 0 | 0 0 2 3 5 | 0 0 2 3 5 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 2 0 | 0 0 1 2 0 | 0 0 1 2 0 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 2 8 | 0 0 0 8 6 | 0 0 0 8 6 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 3 2 | 0 0 0 7 6 | 0 0 0 7 6 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 3 6 | 0 0 0 6 7 | 0 0 0 6 7 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 4 0 | 0 0 0 6 1 | 0 0 0 6 1 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 4 4 | 0 0 0 5 5 | 0 0 0 5 5 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 5 2 | 0 0 0 4 7 | 0 0 0 4 7 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 6 0 | 0 0 0 4 0 | 0 0 0 4 0 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 8 0 | 0 0 0 3 0 | 0 0 0 3 0 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 9 0 | 0 0 0 2 7 | 0 0 0 2 7 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 9 4 | 0 0 0 2 6 | 0 0 0 2 6 |
| 0 1 0  | 0 2 5     | 0 4 0   | 0 9 8 | 0 0 0 2 5 | 0 0 0 2 5 |
| 0 1 0  | 0 2 5     | 0 4 0   | 1 0 0 | 0 0 0 2 4 | 0 0 0 2 4 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 0 6 | 0 0 5 7 2 | 0 0 5 7 2 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 1 0 | 0 0 3 5 4 | 0 0 3 5 4 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 2 0 | 0 0 1 8 1 | 0 0 1 8 1 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 4 0 | 0 0 0 9 2 | 0 0 0 9 2 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 5 2 | 0 0 0 7 0 | 0 0 0 7 0 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 5 6 | 0 0 0 6 5 | 0 0 0 6 5 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 6 0 | 0 0 0 6 1 | 0 0 0 6 1 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 6 4 | 0 0 0 5 7 | 0 0 0 5 7 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 6 8 | 0 0 0 5 4 | 0 0 0 5 4 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 7 2 | 0 0 0 5 1 | 0 0 0 5 1 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 8 0 | 0 0 0 4 6 | 0 0 0 4 6 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 9 0 | 0 0 0 4 1 | 0 0 0 4 1 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 9 4 | 0 0 0 3 9 | 0 0 0 3 9 |
| 0 1 0  | 0 2 5     | 0 6 0   | 0 9 8 | 0 0 0 3 7 | 0 0 0 3 7 |
| 0 1 0  | 0 2 5     | 0 6 0   | 1 0 0 | 0 0 0 3 7 | 0 0 0 3 7 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 0 6 | 0 0 7 6 5 | 0 0 7 6 5 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 1 0 | 0 0 4 7 4 | 0 0 4 7 4 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 2 0 | 0 0 2 4 2 | 0 0 2 4 2 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 4 0 | 0 0 1 2 2 | 0 0 1 2 2 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 6 0 | 0 0 0 8 2 | 0 0 0 8 2 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 6 8 | 0 0 0 7 2 | 0 0 0 7 2 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 7 2 | 0 0 0 6 8 | 0 0 0 6 8 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 7 6 | 0 0 0 6 5 | 0 0 0 6 5 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 8 0 | 0 0 0 6 1 | 0 0 0 6 1 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 8 4 | 0 0 0 5 8 | 0 0 0 5 8 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 8 8 | 0 0 0 5 6 | 0 0 0 5 6 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 9 0 | 0 0 0 5 5 | 0 0 0 5 5 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 9 4 | 0 0 0 5 2 | 0 0 0 5 2 |
| 0 1 0  | 0 2 5     | 0 8 0   | 0 9 8 | 0 0 0 5 0 | 0 0 0 5 0 |
| 0 1 0  | 0 2 5     | 0 8 0   | 1 0 0 | 0 0 0 4 9 | 0 0 0 4 9 |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\ell}^*$ | $I_{\ell}^*$ |
|--------|-----------|---------|-------|--------------|--------------|
| 0 1 0  | 0 2 5     | 0 9 0   | 0 0 6 | 0 0 8 6 1    | 0 0 8 6 1    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 1 0 | 0 0 5 3 3    | 0 0 5 3 3    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 2 0 | 0 0 2 7 3    | 0 0 2 7 3    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 4 0 | 0 0 1 3 8    | 0 0 1 3 8    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 6 0 | 0 0 0 9 2    | 0 0 0 9 2    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 8 0 | 0 0 0 6 9    | 0 0 0 6 9    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 8 4 | 0 0 0 6 6    | 0 0 0 6 6    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 8 8 | 0 0 0 6 3    | 0 0 0 6 3    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 9 0 | 0 0 0 6 1    | 0 0 0 6 1    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 9 2 | 0 0 0 6 0    | 0 0 0 6 0    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 9 4 | 0 0 0 5 9    | 0 0 0 5 9    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 9 6 | 0 0 0 5 8    | 0 0 0 5 8    |
| 0 1 0  | 0 2 5     | 0 9 0   | 0 9 8 | 0 0 0 5 6    | 0 0 0 5 6    |
| 0 1 0  | 0 2 5     | 0 9 0   | 1 0 0 | 0 0 0 5 5    | 0 0 0 5 5    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 0 6 | 0 0 9 0 0    | 0 0 8 9 9    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 1 0 | 0 0 5 5 7    | 0 0 5 5 7    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 2 0 | 0 0 2 8 5    | 0 0 2 8 5    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 4 0 | 0 0 1 4 4    | 0 0 1 4 4    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 6 0 | 0 0 0 9 6    | 0 0 0 9 6    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 8 0 | 0 0 0 7 2    | 0 0 0 7 2    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 8 4 | 0 0 0 6 9    | 0 0 0 6 9    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 8 8 | 0 0 0 6 6    | 0 0 0 6 6    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 9 0 | 0 0 0 6 4    | 0 0 0 6 4    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 9 2 | 0 0 0 6 3    | 0 0 0 6 3    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 9 4 | 0 0 0 6 1    | 0 0 0 6 1    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 9 6 | 0 0 0 6 0    | 0 0 0 6 0    |
| 0 1 0  | 0 2 5     | 0 9 4   | 0 9 8 | 0 0 0 5 9    | 0 0 0 5 9    |
| 0 1 0  | 0 2 5     | 0 9 4   | 1 0 0 | 0 0 0 5 8    | 0 0 0 5 8    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 0 6 | 0 0 9 3 8    | 0 0 9 3 8    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 1 0 | 0 0 5 8 1    | 0 0 5 8 1    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 2 0 | 0 0 2 9 7    | 0 0 2 9 7    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 4 0 | 0 0 1 5 0    | 0 0 1 5 0    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 6 0 | 0 0 1 0 0    | 0 0 1 0 0    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 8 0 | 0 0 0 7 5    | 0 0 0 7 5    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 8 4 | 0 0 0 7 2    | 0 0 0 7 2    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 8 8 | 0 0 0 6 8    | 0 0 0 6 8    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 9 0 | 0 0 0 6 7    | 0 0 0 6 7    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 9 2 | 0 0 0 6 5    | 0 0 0 6 6    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 9 4 | 0 0 0 6 4    | 0 0 0 6 4    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 9 6 | 0 0 0 6 3    | 0 0 0 6 3    |
| 0 1 0  | 0 2 5     | 0 9 8   | 0 9 8 | 0 0 0 6 1    | 0 0 0 6 1    |
| 0 1 0  | 0 2 5     | 0 9 8   | 1 0 0 | 0 0 0 6 0    | 0 0 0 6 0    |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\lambda}$ | $I_{\tau}$ |
|--------|-----------|---------|-------|---------------|------------|
| 0 1 0  | 0 2 5     | 1 0 0   | 0 0 6 | 0 0 9 5 7     | 0 0 9 5 7  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 1 0 | 0 0 5 9 3     | 0 0 5 9 3  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 2 0 | 0 0 3 0 4     | 0 0 3 0 4  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 4 0 | 0 0 1 5 3     | 0 0 1 5 3  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 6 0 | 0 0 1 0 3     | 0 0 1 0 3  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 8 0 | 0 0 0 7 7     | 0 0 0 7 7  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 8 4 | 0 0 0 7 3     | 0 0 0 7 3  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 8 8 | 0 0 0 7 0     | 0 0 0 7 0  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 9 0 | 0 0 0 6 8     | 0 0 0 6 8  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 9 2 | 0 0 0 6 7     | 0 0 0 6 7  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 9 4 | 0 0 0 6 5     | 0 0 0 6 5  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 9 6 | 0 0 0 6 4     | 0 0 0 6 4  |
| 0 1 0  | 0 2 5     | 1 0 0   | 0 9 8 | 0 0 0 6 3     | 0 0 0 6 3  |
| 0 1 0  | 0 2 5     | 1 0 0   | 1 0 0 | 0 0 0 6 1     | 0 0 0 6 2  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 0 2 | 0 0 0 7 9     | 0 0 0 7 9  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 0 4 | 0 0 0 4 4     | 0 0 0 4 4  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 0 6 | 0 0 0 3 0     | 0 0 0 3 0  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 0 8 | 0 0 0 2 3     | 0 0 0 2 3  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 1 0 | 0 0 0 1 9     | 0 0 0 1 9  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 1 2 | 0 0 0 1 6     | 0 0 0 1 6  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 2 0 | 0 0 0 0 9     | 0 0 0 0 9  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 4 0 | 0 0 0 0 4     | 0 0 0 0 4  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 6 0 | 0 0 0 0 3     | 0 0 0 0 3  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 8 0 | 0 0 0 0 2     | 0 0 0 0 2  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 9 0 | 0 0 0 0 2     | 0 0 0 0 2  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 9 4 | 0 0 0 0 2     | 0 0 0 0 2  |
| 0 1 0  | 0 5 0     | 0 0 2   | 0 9 8 | 0 0 0 0 2     | 0 0 0 0 2  |
| 0 1 0  | 0 5 0     | 0 0 2   | 1 0 0 | 0 0 0 0 2     | 0 0 0 0 2  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 0 6 | 0 0 1 8 3     | 0 0 1 8 3  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 0 8 | 0 0 1 4 0     | 0 0 1 4 0  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 1 0 | 0 0 1 1 3     | 0 0 1 1 3  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 1 2 | 0 0 0 9 5     | 0 0 0 9 5  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 1 4 | 0 0 0 8 2     | 0 0 0 8 2  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 1 6 | 0 0 0 7 2     | 0 0 0 7 2  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 1 8 | 0 0 0 6 4     | 0 0 0 6 4  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 2 0 | 0 0 0 5 8     | 0 0 0 5 8  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 4 0 | 0 0 0 2 9     | 0 0 0 2 9  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 6 0 | 0 0 0 1 9     | 0 0 0 1 9  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 8 0 | 0 0 0 1 4     | 0 0 0 1 4  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 9 0 | 0 0 0 1 3     | 0 0 0 1 3  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 9 4 | 0 0 0 1 2     | 0 0 0 1 2  |
| 0 1 0  | 0 5 0     | 0 1 0   | 0 9 8 | 0 0 0 1 2     | 0 0 0 1 2  |
| 0 1 0  | 0 5 0     | 0 1 0   | 1 0 0 | 0 0 0 1 1     | 0 0 0 1 1  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$   | $I_r^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 0 1 0  | 0 5 0     | 0 2 0   | 0 0 6 | 0 0 3 7 6 | 0 0 3 7 6 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 1 0 | 0 0 2 3 3 | 0 0 2 3 3 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 1 4 | 0 0 1 6 9 | 0 0 1 6 8 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 1 8 | 0 0 1 3 2 | 0 0 1 3 2 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 2 0 | 0 0 1 1 9 | 0 0 1 1 9 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 2 4 | 0 0 1 0 0 | 0 0 1 0 0 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 2 8 | 0 0 0 8 5 | 0 0 0 8 5 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 3 2 | 0 0 0 7 5 | 0 0 0 7 5 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 4 0 | 0 0 0 6 0 | 0 0 0 6 0 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 6 0 | 0 0 0 4 0 | 0 0 0 4 0 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 8 0 | 0 0 0 3 0 | 0 0 0 3 0 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 9 0 | 0 0 0 2 7 | 0 0 0 2 7 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 9 4 | 0 0 0 2 5 | 0 0 0 2 5 |
| 0 1 0  | 0 5 0     | 0 2 0   | 0 9 8 | 0 0 0 2 4 | 0 0 0 2 4 |
| 0 1 0  | 0 5 0     | 0 2 0   | 1 0 0 | 0 0 0 2 4 | 0 0 0 2 4 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 0 6 | 0 0 7 6 2 | 0 0 7 6 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 1 0 | 0 0 4 7 2 | 0 0 4 7 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 2 0 | 0 0 2 4 2 | 0 0 2 4 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 2 8 | 0 0 1 7 4 | 0 0 1 7 4 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 3 2 | 0 0 1 5 2 | 0 0 1 5 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 3 6 | 0 0 1 3 5 | 0 0 1 3 5 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 4 0 | 0 0 1 2 2 | 0 0 1 2 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 4 4 | 0 0 1 1 1 | 0 0 1 1 1 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 5 2 | 0 0 0 9 4 | 0 0 0 9 4 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 6 0 | 0 0 0 8 1 | 0 0 0 8 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 8 0 | 0 0 0 6 1 | 0 0 0 6 1 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 9 0 | 0 0 0 5 4 | 0 0 0 5 4 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 9 4 | 0 0 0 5 2 | 0 0 0 5 2 |
| 0 1 0  | 0 5 0     | 0 4 0   | 0 9 8 | 0 0 0 5 0 | 0 0 0 5 0 |
| 0 1 0  | 0 5 0     | 0 4 0   | 1 0 0 | 0 0 0 4 9 | 0 0 0 4 9 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 0 6 | 0 1 1 4 8 | 0 1 1 4 8 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 1 0 | 0 0 7 1 1 | 0 0 7 1 1 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 2 0 | 0 0 3 6 4 | 0 0 3 6 4 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 4 0 | 0 0 1 8 4 | 0 0 1 8 4 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 5 2 | 0 0 1 4 2 | 0 0 1 4 2 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 5 6 | 0 0 1 3 2 | 0 0 1 3 2 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 6 0 | 0 0 1 2 3 | 0 0 1 2 3 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 6 4 | 0 0 1 1 5 | 0 0 1 1 5 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 6 8 | 0 0 1 0 9 | 0 0 1 0 9 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 7 2 | 0 0 1 0 3 | 0 0 1 0 3 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 8 0 | 0 0 0 9 2 | 0 0 0 9 2 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 9 0 | 0 0 0 8 2 | 0 0 0 8 2 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 9 4 | 0 0 0 7 9 | 0 0 0 7 9 |
| 0 1 0  | 0 5 0     | 0 6 0   | 0 9 8 | 0 0 0 7 5 | 0 0 0 7 5 |
| 0 1 0  | 0 5 0     | 0 6 0   | 1 0 0 | 0 0 0 7 4 | 0 0 0 7 4 |

TABLE 3. 1. (continued)

| $\tau$ | $\lambda$ | $u_0$ | $u$   | $I_0^*$   | $I_1^*$   |
|--------|-----------|-------|-------|-----------|-----------|
| 0 1 0  | 0 5 0     | 0 8 0 | 0 0 6 | 0 1 5 3 4 | 0 1 5 3 3 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 1 0 | 0 0 5 3 5 | 0 0 9 5 0 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 2 0 | 0 0 4 6 7 | 0 0 4 8 7 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 4 0 | 0 0 2 4 6 | 0 0 2 4 6 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 6 0 | 0 0 1 6 5 | 0 0 1 6 5 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 6 6 | 0 0 1 4 5 | 0 0 1 4 5 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 7 2 | 0 0 1 3 7 | 0 0 1 3 7 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 7 6 | 0 0 1 3 0 | 0 0 1 3 0 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 8 0 | 0 0 1 2 3 | 0 0 1 2 4 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 8 4 | 0 0 1 1 8 | 0 0 1 1 8 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 8 8 | 0 0 1 1 2 | 0 0 1 1 2 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 9 0 | 0 0 1 1 0 | 0 0 1 1 0 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 9 4 | 0 0 1 0 5 | 0 0 1 0 5 |
| 0 1 0  | 0 5 0     | 0 8 0 | 0 9 8 | 0 0 1 0 1 | 0 0 1 0 1 |
| 0 1 0  | 0 5 0     | 0 8 0 | 1 0 0 | 0 0 0 9 9 | 0 0 0 9 9 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 0 6 | 0 1 7 2 7 | 0 1 7 2 6 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 1 0 | 0 1 0 7 0 | 0 1 0 7 0 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 2 0 | 0 0 5 4 8 | 0 0 5 4 8 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 4 0 | 0 0 2 7 7 | 0 0 2 7 7 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 6 0 | 0 0 1 8 5 | 0 0 1 8 5 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 8 0 | 0 0 1 3 9 | 0 0 1 3 9 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 8 4 | 0 0 1 3 2 | 0 0 1 3 2 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 8 8 | 0 0 1 2 6 | 0 0 1 2 6 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 9 0 | 0 0 1 2 4 | 0 0 1 2 4 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 9 2 | 0 0 1 2 1 | 0 0 1 2 1 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 9 4 | 0 0 1 1 8 | 0 0 1 1 8 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 9 6 | 0 0 1 1 6 | 0 0 1 1 6 |
| 0 1 0  | 0 5 0     | 0 9 0 | 0 9 8 | 0 0 1 1 4 | 0 0 1 1 4 |
| 0 1 0  | 0 5 0     | 0 9 0 | 1 0 0 | 0 0 1 1 1 | 0 0 1 1 1 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 0 6 | 0 1 8 0 4 | 0 1 8 0 4 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 1 0 | 0 1 1 1 8 | 0 1 1 1 6 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 2 0 | 0 0 5 7 2 | 0 0 5 7 2 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 4 0 | 0 0 2 8 9 | 0 0 2 8 9 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 6 0 | 0 0 1 3 4 | 0 0 1 3 4 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 8 0 | 0 0 1 4 5 | 0 0 1 4 5 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 8 4 | 0 0 1 3 8 | 0 0 1 3 8 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 8 8 | 0 0 1 3 2 | 0 0 1 3 2 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 9 0 | 0 0 1 2 9 | 0 0 1 2 9 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 9 2 | 0 0 1 2 6 | 0 0 1 2 6 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 9 4 | 0 0 1 2 4 | 0 0 1 2 4 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 9 6 | 0 0 1 2 1 | 0 0 1 2 1 |
| 0 1 0  | 0 5 0     | 0 9 4 | 0 9 8 | 0 0 1 1 9 | 0 0 1 1 9 |
| 0 1 0  | 0 5 0     | 0 9 4 | 1 0 0 | 0 0 1 1 6 | 0 0 1 1 6 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_\theta^*$ | $I_T^*$ |
|--------|-----------|---------|-------|--------------|---------|
| 010    | 050       | 098     | 006   | 01881        | 01881   |
| 010    | 050       | 098     | 010   | 01166        | 01165   |
| 010    | 050       | 098     | 020   | 00597        | 00597   |
| 010    | 050       | 098     | 040   | 00302        | 00302   |
| 010    | 050       | 098     | 060   | 00202        | 00202   |
| 010    | 050       | 098     | 080   | 00152        | 00152   |
| 010    | 050       | 098     | 084   | 00144        | 00144   |
| 010    | 050       | 098     | 088   | 00138        | 00138   |
| 010    | 050       | 098     | 090   | 00135        | 00135   |
| 010    | 050       | 098     | 092   | 00132        | 00132   |
| 010    | 050       | 098     | 094   | 00129        | 00129   |
| 010    | 050       | 098     | 096   | 00126        | 00126   |
| 010    | 050       | 098     | 098   | 00124        | 00124   |
| 010    | 050       | 098     | 100   | 00121        | 00121   |
| 010    | 050       | 100     | 006   | 01920        | 01919   |
| 010    | 050       | 100     | 010   | 01189        | 01189   |
| 010    | 050       | 100     | 020   | 00609        | 00609   |
| 010    | 050       | 100     | 040   | 00308        | 00308   |
| 010    | 050       | 100     | 060   | 00206        | 00206   |
| 010    | 050       | 100     | 080   | 00155        | 00155   |
| 010    | 050       | 100     | 084   | 00147        | 00147   |
| 010    | 050       | 100     | 088   | 00141        | 00141   |
| 010    | 050       | 100     | 090   | 00138        | 00138   |
| 010    | 050       | 100     | 092   | 00135        | 00135   |
| 010    | 050       | 100     | 094   | 00132        | 00132   |
| 010    | 050       | 100     | 096   | 00129        | 00129   |
| 010    | 050       | 100     | 098   | 00126        | 00126   |
| 010    | 050       | 100     | 100   | 00124        | 00124   |
| 010    | 080       | 002     | 002   | 00127        | 00127   |
| 010    | 080       | 002     | 004   | 00071        | 00071   |
| 010    | 080       | 002     | 006   | 00049        | 00049   |
| 010    | 080       | 002     | 008   | 00038        | 00038   |
| 010    | 080       | 002     | 010   | 00030        | 00030   |
| 010    | 080       | 002     | 012   | 00025        | 00025   |
| 010    | 080       | 002     | 020   | 00015        | 00015   |
| 010    | 080       | 002     | 040   | 00007        | 00007   |
| 010    | 080       | 002     | 060   | 00005        | 00005   |
| 010    | 080       | 002     | 080   | 00004        | 00004   |
| 010    | 080       | 002     | 090   | 00003        | 00003   |
| 010    | 080       | 002     | 094   | 00003        | 00003   |
| 010    | 080       | 002     | 098   | 00003        | 00003   |
| 010    | 080       | 002     | 100   | 00003        | 00003   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\ell}^*$ | $I_{\perp}^*$ |
|--------|-----------|---------|-------|--------------|---------------|
| 0 1 0  | 0 8 0     | 0 1 0   | 0 0 6 | 0 0 2 9 4    | 0 0 2 9 4     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 0 8 | 0 0 2 2 5    | 0 0 2 2 5     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 1 0 | 0 0 1 8 2    | 0 0 1 8 2     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 1 2 | 0 0 1 5 3    | 0 0 1 5 3     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 1 4 | 0 0 1 3 2    | 0 0 1 3 2     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 1 6 | 0 0 1 1 6    | 0 0 1 1 6     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 1 8 | 0 0 1 0 3    | 0 0 1 0 3     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 2 0 | 0 0 0 9 3    | 0 0 0 9 3     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 4 0 | 0 0 0 4 7    | 0 0 0 4 7     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 6 0 | 0 0 0 3 1    | 0 0 0 3 1     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 8 0 | 0 0 0 2 3    | 0 0 0 2 3     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 9 0 | 0 0 0 2 1    | 0 0 0 2 1     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 9 4 | 0 0 0 2 0    | 0 0 0 2 0     |
| 0 1 0  | 0 8 0     | 0 1 0   | 0 9 8 | 0 0 0 1 9    | 0 0 0 1 9     |
| 0 1 0  | 0 8 0     | 0 1 0   | 1 0 0 | 0 0 0 1 9    | 0 0 0 1 9     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 0 6 | 0 0 6 0 4    | 0 0 6 0 4     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 1 0 | 0 0 3 7 4    | 0 0 3 7 4     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 1 4 | 0 0 2 7 1    | 0 0 2 7 1     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 1 8 | 0 0 2 1 2    | 0 0 2 1 2     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 2 0 | 0 0 1 9 1    | 0 0 1 9 1     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 2 4 | 0 0 1 6 0    | 0 0 1 6 0     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 2 8 | 0 0 1 3 7    | 0 0 1 3 7     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 3 2 | 0 0 1 2 0    | 0 0 1 2 1     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 4 0 | 0 0 0 9 7    | 0 0 0 9 7     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 6 0 | 0 0 0 6 4    | 0 0 0 6 4     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 8 0 | 0 0 0 4 8    | 0 0 0 4 8     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 9 0 | 0 0 0 4 3    | 0 0 0 4 3     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 9 4 | 0 0 0 4 1    | 0 0 0 4 1     |
| 0 1 0  | 0 8 0     | 0 2 0   | 0 9 8 | 0 0 0 3 9    | 0 0 0 3 9     |
| 0 1 0  | 0 8 0     | 0 2 0   | 1 0 0 | 0 0 0 3 9    | 0 0 0 3 9     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 0 6 | 0 1 2 2 3    | 0 1 2 2 3     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 1 0 | 0 0 7 5 8    | 0 0 7 5 8     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 2 0 | 0 0 3 8 8    | 0 0 3 8 8     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 2 8 | 0 0 2 7 9    | 0 0 2 7 9     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 3 2 | 0 0 2 4 4    | 0 0 2 4 4     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 3 6 | 0 0 2 1 8    | 0 0 2 1 8     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 4 0 | 0 0 1 9 6    | 0 0 1 9 6     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 4 4 | 0 0 1 7 8    | 0 0 1 7 8     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 5 2 | 0 0 1 5 1    | 0 0 1 5 1     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 6 0 | 0 0 1 3 1    | 0 0 1 3 1     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 8 0 | 0 0 0 9 8    | 0 0 0 9 8     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 9 0 | 0 0 0 8 7    | 0 0 0 8 7     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 9 4 | 0 0 0 8 4    | 0 0 0 8 4     |
| 0 1 0  | 0 8 0     | 0 4 0   | 0 9 8 | 0 0 0 8 0    | 0 0 0 8 0     |
| 0 1 0  | 0 8 0     | 0 4 0   | 1 0 0 | 0 0 0 7 9    | 0 0 0 7 9     |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_2^*$ | $I_T^*$ |
|--------|-----------|---------|-------|---------|---------|
| 010    | 080       | 060     | 006   | 01842   | 01842   |
| 010    | 080       | 060     | 010   | 01141   | 01141   |
| 010    | 080       | 060     | 020   | 00585   | 00585   |
| 010    | 080       | 060     | 040   | 00296   | 00296   |
| 010    | 080       | 060     | 052   | 00228   | 00228   |
| 010    | 080       | 060     | 056   | 00212   | 00212   |
| 010    | 080       | 060     | 060   | 00198   | 00198   |
| 010    | 080       | 060     | 064   | 00185   | 00185   |
| 010    | 080       | 060     | 068   | 00175   | 00175   |
| 010    | 080       | 060     | 072   | 00165   | 00165   |
| 010    | 080       | 060     | 080   | 00148   | 00148   |
| 010    | 080       | 060     | 090   | 00132   | 00132   |
| 010    | 080       | 060     | 094   | 00126   | 00126   |
| 010    | 080       | 060     | 098   | 00121   | 00121   |
| 010    | 080       | 060     | 100   | 00119   | 00119   |
| 010    | 080       | 080     | 006   | 02462   | 02461   |
| 010    | 080       | 080     | 010   | 01525   | 01525   |
| 010    | 080       | 080     | 020   | 00781   | 00781   |
| 010    | 080       | 080     | 040   | 00395   | 00395   |
| 010    | 080       | 080     | 060   | 00264   | 00264   |
| 010    | 080       | 080     | 068   | 00233   | 00233   |
| 010    | 080       | 080     | 072   | 00220   | 00220   |
| 010    | 080       | 080     | 076   | 00209   | 00209   |
| 010    | 080       | 080     | 080   | 00198   | 00199   |
| 010    | 080       | 080     | 084   | 00189   | 00189   |
| 010    | 080       | 080     | 088   | 00180   | 00181   |
| 010    | 080       | 080     | 090   | 00176   | 00177   |
| 010    | 080       | 080     | 094   | 00169   | 00169   |
| 010    | 080       | 080     | 098   | 00162   | 00162   |
| 010    | 080       | 080     | 100   | 00159   | 00159   |
| 010    | 080       | 090     | 006   | 02772   | 02771   |
| 010    | 080       | 090     | 010   | 01717   | 01717   |
| 010    | 080       | 090     | 020   | 00879   | 00879   |
| 010    | 080       | 090     | 040   | 00445   | 00445   |
| 010    | 080       | 090     | 060   | 00298   | 00298   |
| 010    | 080       | 090     | 080   | 00223   | 00224   |
| 010    | 080       | 090     | 084   | 00213   | 00213   |
| 010    | 080       | 090     | 088   | 00203   | 00203   |
| 010    | 080       | 090     | 090   | 00199   | 00199   |
| 010    | 080       | 090     | 092   | 00194   | 00194   |
| 010    | 080       | 090     | 094   | 00190   | 00190   |
| 010    | 080       | 090     | 096   | 00186   | 00186   |
| 010    | 080       | 090     | 098   | 00183   | 00183   |
| 010    | 080       | 090     | 100   | 00179   | 00179   |



TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\ell}^*$ | $I_{\tau}^*$ |
|--------|-----------|---------|-------|--------------|--------------|
| 010    | 080       | 094     | 006   | 02895        | 02894        |
| 010    | 080       | 094     | 010   | 01794        | 01794        |
| 010    | 080       | 094     | 020   | 00919        | 00919        |
| 010    | 080       | 094     | 040   | 00465        | 00465        |
| 010    | 080       | 094     | 060   | 00311        | 00311        |
| 010    | 080       | 094     | 080   | 00233        | 00234        |
| 010    | 080       | 094     | 084   | 00222        | 00222        |
| 010    | 080       | 094     | 088   | 00212        | 00212        |
| 010    | 080       | 094     | 090   | 00208        | 00208        |
| 010    | 080       | 094     | 092   | 00203        | 00203        |
| 010    | 080       | 094     | 094   | 00199        | 00199        |
| 010    | 080       | 094     | 096   | 00195        | 00195        |
| 010    | 080       | 094     | 098   | 00191        | 00191        |
| 010    | 080       | 094     | 100   | 00187        | 00187        |
| 010    | 080       | 098     | 006   | 03019        | 03018        |
| 010    | 080       | 098     | 010   | 01871        | 01870        |
| 010    | 080       | 098     | 020   | 00958        | 00958        |
| 010    | 080       | 098     | 040   | 00485        | 00485        |
| 010    | 080       | 098     | 060   | 00324        | 00324        |
| 010    | 080       | 098     | 080   | 00244        | 00244        |
| 010    | 080       | 098     | 084   | 00232        | 00232        |
| 010    | 080       | 098     | 088   | 00221        | 00221        |
| 010    | 080       | 098     | 090   | 00217        | 00217        |
| 010    | 080       | 098     | 092   | 00212        | 00212        |
| 010    | 080       | 098     | 094   | 00207        | 00207        |
| 010    | 080       | 098     | 096   | 00203        | 00203        |
| 010    | 080       | 098     | 098   | 00199        | 00199        |
| 010    | 080       | 098     | 100   | 00195        | 00195        |
| 010    | 080       | 100     | 006   | 03081        | 03080        |
| 010    | 080       | 100     | 010   | 01909        | 01909        |
| 010    | 080       | 100     | 020   | 00978        | 00978        |
| 010    | 080       | 100     | 040   | 00495        | 00495        |
| 010    | 080       | 100     | 060   | 00331        | 00331        |
| 010    | 080       | 100     | 080   | 00249        | 00249        |
| 010    | 080       | 100     | 084   | 00237        | 00237        |
| 010    | 080       | 100     | 088   | 00226        | 00226        |
| 010    | 080       | 100     | 090   | 00221        | 00221        |
| 010    | 080       | 100     | 092   | 00216        | 00216        |
| 010    | 080       | 100     | 094   | 00212        | 00212        |
| 010    | 080       | 100     | 096   | 00207        | 00207        |
| 010    | 080       | 100     | 098   | 00203        | 00203        |
| 010    | 080       | 100     | 100   | 00199        | 00199        |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\phi}^*$ | $I_{\tau}^*$ |
|--------|-----------|---------|-------|--------------|--------------|
| 020    | 025       | 002     | 002   | 00054        | 00054        |
| 020    | 025       | 002     | 004   | 00033        | 00033        |
| 020    | 025       | 002     | 006   | 00024        | 00024        |
| 020    | 025       | 002     | 008   | 00019        | 00018        |
| 020    | 025       | 002     | 010   | 00015        | 00015        |
| 020    | 025       | 002     | 012   | 00013        | 00013        |
| 020    | 025       | 002     | 020   | 00008        | 00008        |
| 020    | 025       | 002     | 040   | 00004        | 00004        |
| 020    | 025       | 002     | 060   | 00002        | 00002        |
| 020    | 025       | 002     | 080   | 00002        | 00002        |
| 020    | 025       | 002     | 090   | 00001        | 00001        |
| 020    | 025       | 002     | 094   | 00001        | 00001        |
| 020    | 025       | 002     | 098   | 00001        | 00001        |
| 020    | 025       | 002     | 100   | 00001        | 00001        |
| 020    | 025       | 010     | 006   | 00162        | 00162        |
| 020    | 025       | 010     | 008   | 00126        | 00126        |
| 020    | 025       | 010     | 010   | 00103        | 00103        |
| 020    | 025       | 010     | 012   | 00087        | 00087        |
| 020    | 025       | 010     | 014   | 00076        | 00076        |
| 020    | 025       | 010     | 016   | 00067        | 00067        |
| 020    | 025       | 010     | 018   | 00060        | 00060        |
| 020    | 025       | 010     | 020   | 00054        | 00054        |
| 020    | 025       | 010     | 040   | 00027        | 00027        |
| 020    | 025       | 010     | 060   | 00018        | 00018        |
| 020    | 025       | 010     | 080   | 00014        | 00014        |
| 020    | 025       | 010     | 090   | 00012        | 00012        |
| 020    | 025       | 010     | 094   | 00012        | 00012        |
| 020    | 025       | 010     | 098   | 00011        | 00011        |
| 020    | 025       | 010     | 100   | 00011        | 00011        |
| 020    | 025       | 020     | 006   | 00340        | 00339        |
| 020    | 025       | 020     | 010   | 00217        | 00217        |
| 020    | 025       | 020     | 014   | 00159        | 00159        |
| 020    | 025       | 020     | 018   | 00126        | 00125        |
| 020    | 025       | 020     | 020   | 00114        | 00113        |
| 020    | 025       | 020     | 024   | 00096        | 00095        |
| 020    | 025       | 020     | 028   | 00082        | 00082        |
| 020    | 025       | 020     | 032   | 00072        | 00072        |
| 020    | 025       | 020     | 040   | 00058        | 00058        |
| 020    | 025       | 020     | 060   | 00039        | 00039        |
| 020    | 025       | 020     | 080   | 00029        | 00029        |
| 020    | 025       | 020     | 090   | 00026        | 00026        |
| 020    | 025       | 020     | 094   | 00025        | 00025        |
| 020    | 025       | 020     | 098   | 00024        | 00024        |
| 020    | 025       | 020     | 100   | 00024        | 00023        |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$  | $I_1^*$ |
|--------|-----------|---------|-------|--------|---------|
| 0 20   | 0 25      | 0 40    | 0 0 6 | 00 697 | 00 696  |
| 0 20   | 0 25      | 0 40    | 0 1 0 | 00 445 | 00 444  |
| 0 20   | 0 25      | 0 40    | 0 2 0 | 00 234 | 00 233  |
| 0 20   | 0 25      | 0 40    | 0 2 8 | 00 169 | 00 169  |
| 0 20   | 0 25      | 0 40    | 0 3 2 | 00 149 | 00 148  |
| 0 20   | 0 25      | 0 40    | 0 3 6 | 00 133 | 00 132  |
| 0 20   | 0 25      | 0 40    | 0 4 0 | 00 120 | 00 119  |
| 0 20   | 0 25      | 0 40    | 0 4 4 | 00 109 | 00 108  |
| 0 20   | 0 25      | 0 40    | 0 5 2 | 00 092 | 00 092  |
| 0 20   | 0 25      | 0 40    | 0 6 0 | 00 080 | 00 080  |
| 0 20   | 0 25      | 0 40    | 0 8 0 | 00 061 | 00 060  |
| 0 20   | 0 25      | 0 40    | 0 9 0 | 00 054 | 00 054  |
| 0 20   | 0 25      | 0 40    | 0 9 4 | 00 052 | 00 051  |
| 0 20   | 0 25      | 0 40    | 0 9 8 | 00 050 | 00 049  |
| 0 20   | 0 25      | 0 40    | 1 0 0 | 00 049 | 00 048  |
| 0 20   | 0 25      | 0 60    | 0 0 6 | 01 055 | 01 052  |
| 0 20   | 0 25      | 0 60    | 0 1 0 | 00 674 | 00 672  |
| 0 20   | 0 25      | 0 60    | 0 2 0 | 00 354 | 00 353  |
| 0 20   | 0 25      | 0 60    | 0 4 0 | 00 181 | 00 180  |
| 0 20   | 0 25      | 0 60    | 0 5 2 | 00 140 | 00 139  |
| 0 20   | 0 25      | 0 60    | 0 5 6 | 00 130 | 00 130  |
| 0 20   | 0 25      | 0 60    | 0 6 0 | 00 122 | 00 121  |
| 0 20   | 0 25      | 0 60    | 0 6 4 | 00 114 | 00 114  |
| 0 20   | 0 25      | 0 60    | 0 6 8 | 00 108 | 00 107  |
| 0 20   | 0 25      | 0 60    | 0 7 2 | 00 102 | 00 101  |
| 0 20   | 0 25      | 0 60    | 0 8 0 | 00 092 | 00 091  |
| 0 20   | 0 25      | 0 60    | 0 9 0 | 00 082 | 00 081  |
| 0 20   | 0 25      | 0 60    | 0 9 4 | 00 079 | 00 078  |
| 0 20   | 0 25      | 0 60    | 0 9 8 | 00 076 | 00 075  |
| 0 20   | 0 25      | 0 60    | 1 0 0 | 00 075 | 00 073  |
| 0 20   | 0 25      | 0 80    | 0 0 6 | 01 412 | 01 409  |
| 0 20   | 0 25      | 0 80    | 0 1 0 | 00 902 | 00 900  |
| 0 20   | 0 25      | 0 80    | 0 2 0 | 00 474 | 00 472  |
| 0 20   | 0 25      | 0 80    | 0 4 0 | 00 243 | 00 242  |
| 0 20   | 0 25      | 0 80    | 0 6 0 | 00 163 | 00 162  |
| 0 20   | 0 25      | 0 80    | 0 6 8 | 00 144 | 00 144  |
| 0 20   | 0 25      | 0 80    | 0 7 2 | 00 137 | 00 136  |
| 0 20   | 0 25      | 0 80    | 0 7 6 | 00 130 | 00 129  |
| 0 20   | 0 25      | 0 80    | 0 8 0 | 00 123 | 00 122  |
| 0 20   | 0 25      | 0 80    | 0 8 4 | 00 118 | 00 117  |
| 0 20   | 0 25      | 0 80    | 0 8 8 | 00 113 | 00 111  |
| 0 20   | 0 25      | 0 80    | 0 9 0 | 00 110 | 00 109  |
| 0 20   | 0 25      | 0 80    | 0 9 4 | 00 106 | 00 104  |
| 0 20   | 0 25      | 0 80    | 0 9 8 | 00 102 | 00 100  |
| 0 20   | 0 25      | 0 80    | 1 0 0 | 00 100 | 00 098  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\lambda}^*$ | $I_{\tau}^*$ |
|--------|-----------|---------|-------|-----------------|--------------|
| 0 2 0  | 0 2 5     | 0 9 0   | 0 0 6 | 0 1 5 9 1       | 0 1 5 8 7    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 1 0 | 0 1 0 1 7       | 0 1 0 1 4    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 2 0 | 0 0 5 3 4       | 0 0 5 3 2    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 4 0 | 0 0 2 7 3       | 0 0 2 7 2    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 6 0 | 0 0 1 8 4       | 0 0 1 8 3    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 8 0 | 0 0 1 3 9       | 0 0 1 3 8    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 8 4 | 0 0 1 3 3       | 0 0 1 3 1    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 8 8 | 0 0 1 2 7       | 0 0 1 2 6    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 9 0 | 0 0 1 2 4       | 0 0 1 2 3    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 9 2 | 0 0 1 2 2       | 0 0 1 2 0    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 9 4 | 0 0 1 1 9       | 0 0 1 1 8    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 9 6 | 0 0 1 1 7       | 0 0 1 1 5    |
| 0 2 0  | 0 2 5     | 0 9 0   | 0 9 8 | 0 0 1 1 5       | 0 0 1 1 3    |
| 0 2 0  | 0 2 5     | 0 9 0   | 1 0 0 | 0 0 1 1 3       | 0 0 1 1 1    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 0 6 | 0 1 6 6 2       | 0 1 6 5 9    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 1 0 | 0 1 0 6 2       | 0 1 0 6 0    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 2 0 | 0 0 5 5 8       | 0 0 5 5 6    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 4 0 | 0 0 2 8 6       | 0 0 2 8 5    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 6 0 | 0 0 1 9 2       | 0 0 1 9 1    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 8 0 | 0 0 1 4 5       | 0 0 1 4 4    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 8 4 | 0 0 1 3 9       | 0 0 1 3 7    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 8 8 | 0 0 1 3 3       | 0 0 1 3 1    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 9 0 | 0 0 1 3 0       | 0 0 1 2 8    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 9 2 | 0 0 1 2 7       | 0 0 1 2 6    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 9 4 | 0 0 1 2 5       | 0 0 1 2 3    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 9 6 | 0 0 1 2 2       | 0 0 1 2 1    |
| 0 2 0  | 0 2 5     | 0 9 4   | 0 9 8 | 0 0 1 2 0       | 0 0 1 1 8    |
| 0 2 0  | 0 2 5     | 0 9 4   | 1 0 0 | 0 0 1 1 8       | 0 0 1 1 6    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 0 6 | 0 1 7 3 4       | 0 1 7 3 0    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 1 0 | 0 1 1 0 8       | 0 1 1 0 5    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 2 0 | 0 0 5 8 2       | 0 0 5 8 0    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 4 0 | 0 0 2 9 8       | 0 0 2 9 7    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 6 0 | 0 0 2 0 0       | 0 0 1 9 9    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 8 0 | 0 0 1 5 2       | 0 0 1 5 0    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 8 4 | 0 0 1 4 5       | 0 0 1 4 3    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 8 8 | 0 0 1 3 8       | 0 0 1 3 7    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 9 0 | 0 0 1 3 6       | 0 0 1 3 4    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 9 2 | 0 0 1 3 3       | 0 0 1 3 1    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 9 4 | 0 0 1 3 0       | 0 0 1 2 8    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 9 6 | 0 0 1 2 8       | 0 0 1 2 6    |
| 0 2 0  | 0 2 5     | 0 9 8   | 0 9 8 | 0 0 1 2 5       | 0 0 1 2 3    |
| 0 2 0  | 0 2 5     | 0 9 8   | 1 0 0 | 0 0 1 2 3       | 0 0 1 2 1    |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_h^*$ | $I_v^*$ |
|--------|-----------|---------|-------|---------|---------|
| 020    | 025       | 100     | 006   | 01769   | 01766   |
| 020    | 025       | 100     | 010   | 01131   | 01128   |
| 020    | 025       | 100     | 020   | 00594   | 00592   |
| 020    | 025       | 100     | 040   | 00304   | 00303   |
| 020    | 025       | 100     | 060   | 00205   | 00204   |
| 020    | 025       | 100     | 080   | 00155   | 00153   |
| 020    | 025       | 100     | 084   | 00148   | 00146   |
| 020    | 025       | 100     | 088   | 00141   | 00140   |
| 020    | 025       | 100     | 090   | 00138   | 00137   |
| 020    | 025       | 100     | 092   | 00136   | 00134   |
| 020    | 025       | 100     | 094   | 00133   | 00131   |
| 020    | 025       | 100     | 096   | 00130   | 00128   |
| 020    | 025       | 100     | 098   | 00128   | 00126   |
| 020    | 025       | 100     | 100   | 00126   | 00123   |
| 020    | 050       | 002     | 002   | 00109   | 00109   |
| 020    | 050       | 002     | 004   | 00068   | 00067   |
| 020    | 050       | 002     | 006   | 00048   | 00048   |
| 020    | 050       | 002     | 008   | 00038   | 00039   |
| 020    | 050       | 002     | 010   | 00031   | 00031   |
| 020    | 050       | 002     | 012   | 00026   | 00026   |
| 020    | 050       | 002     | 020   | 00016   | 00016   |
| 020    | 050       | 002     | 040   | 00008   | 00008   |
| 020    | 050       | 002     | 060   | 00005   | 00005   |
| 020    | 050       | 002     | 080   | 00004   | 00004   |
| 020    | 050       | 002     | 090   | 00003   | 00003   |
| 020    | 050       | 002     | 094   | 00003   | 00003   |
| 020    | 050       | 002     | 098   | 00003   | 00003   |
| 020    | 050       | 002     | 100   | 00003   | 00003   |
| 020    | 050       | 010     | 006   | 00326   | 00325   |
| 020    | 050       | 010     | 008   | 00254   | 00254   |
| 020    | 050       | 010     | 010   | 00208   | 00208   |
| 020    | 050       | 010     | 012   | 00176   | 00176   |
| 020    | 050       | 010     | 014   | 00153   | 00152   |
| 020    | 050       | 010     | 016   | 00135   | 00134   |
| 020    | 050       | 010     | 018   | 00121   | 00120   |
| 020    | 050       | 010     | 020   | 00109   | 00109   |
| 020    | 050       | 010     | 040   | 00056   | 00055   |
| 020    | 050       | 010     | 060   | 00037   | 00037   |
| 020    | 050       | 010     | 080   | 00028   | 00028   |
| 020    | 050       | 010     | 090   | 00025   | 00025   |
| 020    | 050       | 010     | 094   | 00024   | 00024   |
| 020    | 050       | 010     | 098   | 00023   | 00023   |
| 020    | 050       | 010     | 100   | 00023   | 00022   |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_\ell^*$ | $I_r^*$ |
|--------|-----------|---------|-------|------------|---------|
| 020    | 050       | 020     | 006   | 00684      | 00682   |
| 020    | 050       | 020     | 010   | 00437      | 00436   |
| 020    | 050       | 020     | 014   | 00321      | 00320   |
| 020    | 050       | 020     | 018   | 00253      | 00253   |
| 020    | 050       | 020     | 020   | 00229      | 00228   |
| 020    | 050       | 020     | 024   | 00193      | 00192   |
| 020    | 050       | 020     | 028   | 00166      | 00165   |
| 020    | 050       | 020     | 032   | 00146      | 00145   |
| 020    | 050       | 020     | 040   | 00117      | 00117   |
| 020    | 050       | 020     | 060   | 00079      | 00078   |
| 020    | 050       | 020     | 080   | 00060      | 00059   |
| 020    | 050       | 020     | 090   | 00053      | 00053   |
| 020    | 050       | 020     | 094   | 00051      | 00050   |
| 020    | 050       | 020     | 098   | 00049      | 00048   |
| 020    | 050       | 020     | 100   | 00048      | 00047   |
| 020    | 050       | 040     | 006   | 01402      | 01399   |
| 020    | 050       | 040     | 010   | 00896      | 00894   |
| 020    | 050       | 040     | 020   | 00470      | 00469   |
| 020    | 050       | 040     | 028   | 00341      | 00339   |
| 020    | 050       | 040     | 032   | 00299      | 00298   |
| 020    | 050       | 040     | 036   | 00267      | 00265   |
| 020    | 050       | 040     | 040   | 00241      | 00240   |
| 020    | 050       | 040     | 044   | 00219      | 00218   |
| 020    | 050       | 040     | 052   | 00186      | 00185   |
| 020    | 050       | 040     | 060   | 00162      | 00161   |
| 020    | 050       | 040     | 080   | 00122      | 00121   |
| 020    | 050       | 040     | 090   | 00110      | 00108   |
| 020    | 050       | 040     | 094   | 00105      | 00104   |
| 020    | 050       | 040     | 098   | 00101      | 00100   |
| 020    | 050       | 040     | 100   | 00099      | 00098   |
| 020    | 050       | 060     | 006   | 02120      | 02115   |
| 020    | 050       | 060     | 010   | 01355      | 01352   |
| 020    | 050       | 060     | 020   | 00711      | 00709   |
| 020    | 050       | 060     | 040   | 00365      | 00363   |
| 020    | 050       | 060     | 052   | 00282      | 00281   |
| 020    | 050       | 060     | 056   | 00262      | 00261   |
| 020    | 050       | 060     | 060   | 00245      | 00244   |
| 020    | 050       | 060     | 064   | 00230      | 00229   |
| 020    | 050       | 060     | 068   | 00217      | 00216   |
| 020    | 050       | 060     | 072   | 00205      | 00204   |
| 020    | 050       | 060     | 080   | 00185      | 00184   |
| 020    | 050       | 060     | 090   | 00166      | 00164   |
| 020    | 050       | 060     | 094   | 00159      | 00157   |
| 020    | 050       | 060     | 098   | 00153      | 00151   |
| 020    | 050       | 060     | 100   | 00151      | 00148   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$ | $I_1^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.20   | 0.50      | 0.80    | 0.06  | 0.2838  | 0.2832  |
| 0.20   | 0.50      | 0.80    | 0.10  | 0.1814  | 0.1810  |
| 0.20   | 0.50      | 0.80    | 0.20  | 0.0952  | 0.0949  |
| 0.20   | 0.50      | 0.80    | 0.40  | 0.0458  | 0.0456  |
| 0.20   | 0.50      | 0.80    | 0.60  | 0.0328  | 0.0327  |
| 0.20   | 0.50      | 0.80    | 0.68  | 0.0291  | 0.0289  |
| 0.20   | 0.50      | 0.80    | 0.72  | 0.0275  | 0.0273  |
| 0.20   | 0.50      | 0.80    | 0.76  | 0.0261  | 0.0259  |
| 0.20   | 0.50      | 0.80    | 0.80  | 0.0248  | 0.0246  |
| 0.20   | 0.50      | 0.80    | 0.84  | 0.0237  | 0.0235  |
| 0.20   | 0.50      | 0.80    | 0.88  | 0.0227  | 0.0224  |
| 0.20   | 0.50      | 0.80    | 0.90  | 0.0222  | 0.0220  |
| 0.20   | 0.50      | 0.80    | 0.94  | 0.0213  | 0.0210  |
| 0.20   | 0.50      | 0.80    | 0.98  | 0.0205  | 0.0202  |
| 0.20   | 0.50      | 0.80    | 1.00  | 0.0202  | 0.0198  |
| 0.20   | 0.50      | 0.90    | 0.06  | 0.3197  | 0.3190  |
| 0.20   | 0.50      | 0.90    | 0.10  | 0.2043  | 0.2039  |
| 0.20   | 0.50      | 0.90    | 0.20  | 0.1073  | 0.1069  |
| 0.20   | 0.50      | 0.90    | 0.40  | 0.0550  | 0.0548  |
| 0.20   | 0.50      | 0.90    | 0.60  | 0.0370  | 0.0368  |
| 0.20   | 0.50      | 0.90    | 0.80  | 0.0280  | 0.0278  |
| 0.20   | 0.50      | 0.90    | 0.84  | 0.0267  | 0.0265  |
| 0.20   | 0.50      | 0.90    | 0.88  | 0.0256  | 0.0253  |
| 0.20   | 0.50      | 0.90    | 0.90  | 0.0250  | 0.0247  |
| 0.20   | 0.50      | 0.90    | 0.92  | 0.0245  | 0.0242  |
| 0.20   | 0.50      | 0.90    | 0.94  | 0.0241  | 0.0237  |
| 0.20   | 0.50      | 0.90    | 0.96  | 0.0236  | 0.0232  |
| 0.20   | 0.50      | 0.90    | 0.98  | 0.0232  | 0.0228  |
| 0.20   | 0.50      | 0.90    | 1.00  | 0.0227  | 0.0223  |
| 0.20   | 0.50      | 0.94    | 0.06  | 0.3341  | 0.3334  |
| 0.20   | 0.50      | 0.94    | 0.10  | 0.2135  | 0.2130  |
| 0.20   | 0.50      | 0.94    | 0.20  | 0.1121  | 0.1118  |
| 0.20   | 0.50      | 0.94    | 0.40  | 0.0575  | 0.0572  |
| 0.20   | 0.50      | 0.94    | 0.60  | 0.0387  | 0.0385  |
| 0.20   | 0.50      | 0.94    | 0.80  | 0.0293  | 0.0290  |
| 0.20   | 0.50      | 0.94    | 0.84  | 0.0279  | 0.0277  |
| 0.20   | 0.50      | 0.94    | 0.88  | 0.0267  | 0.0264  |
| 0.20   | 0.50      | 0.94    | 0.90  | 0.0262  | 0.0259  |
| 0.20   | 0.50      | 0.94    | 0.92  | 0.0256  | 0.0253  |
| 0.20   | 0.50      | 0.94    | 0.94  | 0.0251  | 0.0248  |
| 0.20   | 0.50      | 0.94    | 0.96  | 0.0247  | 0.0243  |
| 0.20   | 0.50      | 0.94    | 0.98  | 0.0242  | 0.0238  |
| 0.20   | 0.50      | 0.94    | 1.00  | 0.0238  | 0.0233  |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$ | $I_1^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0 20   | 0 50      | 0 98    | 0 06  | 0 3485  | 0 3477  |
| 0 20   | 0 50      | 0 98    | 0 10  | 0 2227  | 0 2222  |
| 0 20   | 0 50      | 0 98    | 0 20  | 0 1169  | 0 1166  |
| 0 20   | 0 50      | 0 98    | 0 40  | 0 0600  | 0 0597  |
| 0 20   | 0 50      | 0 98    | 0 60  | 0 0403  | 0 0401  |
| 0 20   | 0 50      | 0 98    | 0 80  | 0 0305  | 0 0303  |
| 0 20   | 0 50      | 0 98    | 0 84  | 0 0291  | 0 0289  |
| 0 20   | 0 50      | 0 98    | 0 88  | 0 0279  | 0 0276  |
| 0 20   | 0 50      | 0 98    | 0 90  | 0 0273  | 0 0270  |
| 0 20   | 0 50      | 0 98    | 0 92  | 0 0267  | 0 0264  |
| 0 20   | 0 50      | 0 98    | 0 94  | 0 0262  | 0 0258  |
| 0 20   | 0 50      | 0 98    | 0 96  | 0 0257  | 0 0253  |
| 0 20   | 0 50      | 0 98    | 0 98  | 0 0252  | 0 0248  |
| 0 20   | 0 50      | 0 98    | 1 00  | 0 0248  | 0 0243  |
| 0 20   | 0 50      | 1 00    | 0 06  | 0 3556  | 0 3549  |
| 0 20   | 0 50      | 1 00    | 0 10  | 0 2273  | 0 2268  |
| 0 20   | 0 50      | 1 00    | 0 20  | 0 1193  | 0 1190  |
| 0 20   | 0 50      | 1 00    | 0 40  | 0 0612  | 0 0609  |
| 0 20   | 0 50      | 1 00    | 0 60  | 0 0412  | 0 0410  |
| 0 20   | 0 50      | 1 00    | 0 80  | 0 0311  | 0 0309  |
| 0 20   | 0 50      | 1 00    | 0 84  | 0 0297  | 0 0294  |
| 0 20   | 0 50      | 1 00    | 0 88  | 0 0285  | 0 0281  |
| 0 20   | 0 50      | 1 00    | 0 90  | 0 0279  | 0 0275  |
| 0 20   | 0 50      | 1 00    | 0 92  | 0 0273  | 0 0269  |
| 0 20   | 0 50      | 1 00    | 0 94  | 0 0268  | 0 0264  |
| 0 20   | 0 50      | 1 00    | 0 96  | 0 0262  | 0 0258  |
| 0 20   | 0 50      | 1 00    | 0 98  | 0 0256  | 0 0253  |
| 0 20   | 0 50      | 1 00    | 1 00  | 0 0253  | 0 0248  |
| 0 20   | 0 80      | 0 02    | 0 02  | 0 0176  | 0 0176  |
| 0 20   | 0 80      | 0 02    | 0 04  | 0 0109  | 0 0109  |
| 0 20   | 0 80      | 0 02    | 0 06  | 0 0078  | 0 0078  |
| 0 20   | 0 80      | 0 02    | 0 08  | 0 0061  | 0 0061  |
| 0 20   | 0 80      | 0 02    | 0 10  | 0 0050  | 0 0050  |
| 0 20   | 0 80      | 0 02    | 0 12  | 0 0042  | 0 0042  |
| 0 20   | 0 80      | 0 02    | 0 20  | 0 0026  | 0 0026  |
| 0 20   | 0 80      | 0 02    | 0 40  | 0 0013  | 0 0013  |
| 0 20   | 0 80      | 0 02    | 0 60  | 0 0009  | 0 0009  |
| 0 20   | 0 80      | 0 02    | 0 80  | 0 0006  | 0 0006  |
| 0 20   | 0 80      | 0 02    | 0 90  | 0 0006  | 0 0006  |
| 0 20   | 0 80      | 0 02    | 0 94  | 0 0005  | 0 0005  |
| 0 20   | 0 80      | 0 02    | 0 98  | 0 0005  | 0 0005  |
| 0 20   | 0 80      | 0 02    | 1 00  | 0 0005  | 0 0005  |



TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_\theta^*$ | $I_T^*$ |
|--------|-----------|---------|-------|--------------|---------|
| 020    | 080       | 010     | 006   | 00525        | 00524   |
| 020    | 080       | 010     | 008   | 00410        | 00409   |
| 020    | 080       | 010     | 010   | 00335        | 00335   |
| 020    | 080       | 010     | 012   | 00284        | 00283   |
| 020    | 080       | 010     | 014   | 00246        | 00246   |
| 020    | 080       | 010     | 016   | 00217        | 00217   |
| 020    | 080       | 010     | 018   | 00194        | 00194   |
| 020    | 080       | 010     | 020   | 00176        | 00175   |
| 020    | 080       | 010     | 040   | 00090        | 00090   |
| 020    | 080       | 010     | 060   | 00060        | 00060   |
| 020    | 080       | 010     | 080   | 00046        | 00045   |
| 020    | 080       | 010     | 090   | 00041        | 00040   |
| 020    | 080       | 010     | 094   | 00039        | 00039   |
| 020    | 080       | 010     | 098   | 00038        | 00037   |
| 020    | 080       | 010     | 100   | 00037        | 00036   |
| 020    | 080       | 020     | 006   | 01101        | 01098   |
| 020    | 080       | 020     | 010   | 00703        | 00702   |
| 020    | 080       | 020     | 014   | 00516        | 00515   |
| 020    | 080       | 020     | 018   | 00408        | 00407   |
| 020    | 080       | 020     | 020   | 00369        | 00368   |
| 020    | 080       | 020     | 024   | 00310        | 00309   |
| 020    | 080       | 020     | 028   | 00267        | 00266   |
| 020    | 080       | 020     | 032   | 00235        | 00234   |
| 020    | 080       | 020     | 040   | 00189        | 00188   |
| 020    | 080       | 020     | 060   | 00127        | 00126   |
| 020    | 080       | 020     | 080   | 00095        | 00095   |
| 020    | 080       | 020     | 090   | 00086        | 00085   |
| 020    | 080       | 020     | 094   | 00083        | 00081   |
| 020    | 080       | 020     | 098   | 00079        | 00078   |
| 020    | 080       | 020     | 100   | 00078        | 00077   |
| 020    | 080       | 040     | 006   | 02256        | 02251   |
| 020    | 080       | 040     | 010   | 01442        | 01438   |
| 020    | 080       | 040     | 020   | 00757        | 00754   |
| 020    | 080       | 040     | 028   | 00548        | 00546   |
| 020    | 080       | 040     | 032   | 00482        | 00480   |
| 020    | 080       | 040     | 036   | 00430        | 00428   |
| 020    | 080       | 040     | 040   | 00388        | 00386   |
| 020    | 080       | 040     | 044   | 00354        | 00352   |
| 020    | 080       | 040     | 052   | 00300        | 00299   |
| 020    | 080       | 040     | 060   | 00261        | 00260   |
| 020    | 080       | 040     | 080   | 00197        | 00196   |
| 020    | 080       | 040     | 090   | 00177        | 00174   |
| 020    | 080       | 040     | 094   | 00170        | 00167   |
| 020    | 080       | 040     | 098   | 00163        | 00160   |
| 020    | 080       | 040     | 100   | 00160        | 00157   |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.20   | 0.80      | 0.60    | 0.06  | 0.3412  | 0.3404  |
| 0.20   | 0.80      | 0.60    | 0.10  | 0.2180  | 0.2175  |
| 0.20   | 0.80      | 0.60    | 0.20  | 0.1145  | 0.1141  |
| 0.20   | 0.80      | 0.60    | 0.40  | 0.0587  | 0.0584  |
| 0.20   | 0.80      | 0.60    | 0.52  | 0.0454  | 0.0452  |
| 0.20   | 0.80      | 0.60    | 0.56  | 0.0422  | 0.0420  |
| 0.20   | 0.80      | 0.60    | 0.60  | 0.0395  | 0.0393  |
| 0.20   | 0.80      | 0.60    | 0.64  | 0.0371  | 0.0369  |
| 0.20   | 0.80      | 0.60    | 0.68  | 0.0350  | 0.0347  |
| 0.20   | 0.80      | 0.60    | 0.72  | 0.0331  | 0.0329  |
| 0.20   | 0.80      | 0.60    | 0.80  | 0.0299  | 0.0296  |
| 0.20   | 0.80      | 0.60    | 0.90  | 0.0267  | 0.0264  |
| 0.20   | 0.80      | 0.60    | 0.94  | 0.0257  | 0.0253  |
| 0.20   | 0.80      | 0.60    | 0.98  | 0.0247  | 0.0243  |
| 0.20   | 0.80      | 0.60    | 1.00  | 0.0243  | 0.0238  |
| 0.20   | 0.80      | 0.80    | 0.06  | 0.4568  | 0.4558  |
| 0.20   | 0.80      | 0.80    | 0.10  | 0.2919  | 0.2912  |
| 0.20   | 0.80      | 0.80    | 0.20  | 0.1533  | 0.1528  |
| 0.20   | 0.80      | 0.80    | 0.40  | 0.0786  | 0.0783  |
| 0.20   | 0.80      | 0.80    | 0.60  | 0.0529  | 0.0526  |
| 0.20   | 0.80      | 0.80    | 0.68  | 0.0468  | 0.0465  |
| 0.20   | 0.80      | 0.80    | 0.72  | 0.0443  | 0.0440  |
| 0.20   | 0.80      | 0.80    | 0.76  | 0.0420  | 0.0417  |
| 0.20   | 0.80      | 0.80    | 0.80  | 0.0400  | 0.0397  |
| 0.20   | 0.80      | 0.80    | 0.84  | 0.0382  | 0.0378  |
| 0.20   | 0.80      | 0.80    | 0.88  | 0.0366  | 0.0362  |
| 0.20   | 0.80      | 0.80    | 0.90  | 0.0358  | 0.0354  |
| 0.20   | 0.80      | 0.80    | 0.94  | 0.0344  | 0.0339  |
| 0.20   | 0.80      | 0.80    | 0.98  | 0.0331  | 0.0325  |
| 0.20   | 0.80      | 0.80    | 1.00  | 0.0325  | 0.0319  |
| 0.20   | 0.80      | 0.90    | 0.06  | 0.5146  | 0.5135  |
| 0.20   | 0.80      | 0.90    | 0.10  | 0.3289  | 0.3281  |
| 0.20   | 0.80      | 0.90    | 0.20  | 0.1727  | 0.1721  |
| 0.20   | 0.80      | 0.90    | 0.40  | 0.0886  | 0.0882  |
| 0.20   | 0.80      | 0.90    | 0.60  | 0.0596  | 0.0593  |
| 0.20   | 0.80      | 0.90    | 0.80  | 0.0451  | 0.0447  |
| 0.20   | 0.80      | 0.90    | 0.84  | 0.0430  | 0.0426  |
| 0.20   | 0.80      | 0.90    | 0.88  | 0.0412  | 0.0407  |
| 0.20   | 0.80      | 0.90    | 0.90  | 0.0403  | 0.0398  |
| 0.20   | 0.80      | 0.90    | 0.92  | 0.0395  | 0.0390  |
| 0.20   | 0.80      | 0.90    | 0.94  | 0.0387  | 0.0382  |
| 0.20   | 0.80      | 0.90    | 0.96  | 0.0380  | 0.0374  |
| 0.20   | 0.80      | 0.90    | 0.98  | 0.0373  | 0.0367  |
| 0.20   | 0.80      | 0.90    | 1.00  | 0.0366  | 0.0359  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_r^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.20   | 0.80      | 0.94    | 0.06  | 0.5377  | 0.5365  |
| 0.20   | 0.80      | 0.94    | 0.10  | 0.3436  | 0.3428  |
| 0.20   | 0.80      | 0.94    | 0.20  | 0.1805  | 0.1799  |
| 0.20   | 0.80      | 0.94    | 0.40  | 0.0925  | 0.0921  |
| 0.20   | 0.80      | 0.94    | 0.60  | 0.0623  | 0.0619  |
| 0.20   | 0.80      | 0.94    | 0.80  | 0.0471  | 0.0467  |
| 0.20   | 0.80      | 0.94    | 0.84  | 0.0450  | 0.0445  |
| 0.20   | 0.80      | 0.94    | 0.88  | 0.0430  | 0.0426  |
| 0.20   | 0.80      | 0.94    | 0.90  | 0.0421  | 0.0416  |
| 0.20   | 0.80      | 0.94    | 0.92  | 0.0413  | 0.0408  |
| 0.20   | 0.80      | 0.94    | 0.94  | 0.0405  | 0.0399  |
| 0.20   | 0.80      | 0.94    | 0.96  | 0.0397  | 0.0391  |
| 0.20   | 0.80      | 0.94    | 0.98  | 0.0390  | 0.0383  |
| 0.20   | 0.80      | 0.94    | 1.00  | 0.0383  | 0.0376  |
| 0.20   | 0.80      | 0.98    | 0.06  | 0.5608  | 0.5596  |
| 0.20   | 0.80      | 0.98    | 0.10  | 0.3584  | 0.3576  |
| 0.20   | 0.80      | 0.98    | 0.20  | 0.1882  | 0.1876  |
| 0.20   | 0.80      | 0.98    | 0.40  | 0.0965  | 0.0961  |
| 0.20   | 0.80      | 0.98    | 0.60  | 0.0649  | 0.0646  |
| 0.20   | 0.80      | 0.98    | 0.80  | 0.0491  | 0.0487  |
| 0.20   | 0.80      | 0.98    | 0.84  | 0.0469  | 0.0465  |
| 0.20   | 0.80      | 0.98    | 0.88  | 0.0449  | 0.0444  |
| 0.20   | 0.80      | 0.98    | 0.90  | 0.0440  | 0.0434  |
| 0.20   | 0.80      | 0.98    | 0.92  | 0.0431  | 0.0425  |
| 0.20   | 0.80      | 0.98    | 0.94  | 0.0422  | 0.0416  |
| 0.20   | 0.80      | 0.98    | 0.96  | 0.0414  | 0.0408  |
| 0.20   | 0.80      | 0.98    | 0.98  | 0.0406  | 0.0400  |
| 0.20   | 0.80      | 0.98    | 1.00  | 0.0399  | 0.0392  |
| 0.20   | 0.80      | 1.00    | 0.06  | 0.5724  | 0.5711  |
| 0.20   | 0.80      | 1.00    | 0.10  | 0.3658  | 0.3650  |
| 0.20   | 0.80      | 1.00    | 0.20  | 0.1921  | 0.1915  |
| 0.20   | 0.80      | 1.00    | 0.40  | 0.0985  | 0.0981  |
| 0.20   | 0.80      | 1.00    | 0.60  | 0.0653  | 0.0659  |
| 0.20   | 0.80      | 1.00    | 0.80  | 0.0501  | 0.0497  |
| 0.20   | 0.80      | 1.00    | 0.84  | 0.0479  | 0.0474  |
| 0.20   | 0.80      | 1.00    | 0.88  | 0.0458  | 0.0453  |
| 0.20   | 0.80      | 1.00    | 0.90  | 0.0449  | 0.0443  |
| 0.20   | 0.80      | 1.00    | 0.92  | 0.0440  | 0.0434  |
| 0.20   | 0.80      | 1.00    | 0.94  | 0.0431  | 0.0425  |
| 0.20   | 0.80      | 1.00    | 0.96  | 0.0423  | 0.0416  |
| 0.20   | 0.80      | 1.00    | 0.98  | 0.0415  | 0.0408  |
| 0.20   | 0.80      | 1.00    | 1.00  | 0.0407  | 0.0400  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_p^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.50   | 0.25      | 0.02    | 0.02  | 00.063  | 00.062  |
| 0.50   | 0.25      | 0.02    | 0.04  | 00.048  | 00.048  |
| 0.50   | 0.25      | 0.02    | 0.06  | 00.038  | 00.037  |
| 0.50   | 0.25      | 0.02    | 0.08  | 00.031  | 00.031  |
| 0.50   | 0.25      | 0.02    | 0.10  | 00.026  | 00.026  |
| 0.50   | 0.25      | 0.02    | 0.12  | 00.022  | 00.022  |
| 0.50   | 0.25      | 0.02    | 0.20  | 00.014  | 00.014  |
| 0.50   | 0.25      | 0.02    | 0.40  | 00.007  | 00.007  |
| 0.50   | 0.25      | 0.02    | 0.60  | 00.005  | 00.005  |
| 0.50   | 0.25      | 0.02    | 0.80  | 00.004  | 00.004  |
| 0.50   | 0.25      | 0.02    | 0.90  | 00.003  | 00.003  |
| 0.50   | 0.25      | 0.02    | 0.94  | 00.003  | 00.003  |
| 0.50   | 0.25      | 0.02    | 0.98  | 00.003  | 00.003  |
| 0.50   | 0.25      | 0.02    | 1.00  | 00.003  | 00.003  |
| 0.50   | 0.25      | 0.10    | 0.06  | 00.290  | 00.289  |
| 0.50   | 0.25      | 0.10    | 0.08  | 00.238  | 00.237  |
| 0.50   | 0.25      | 0.10    | 0.10  | 00.201  | 00.200  |
| 0.50   | 0.25      | 0.10    | 0.12  | 00.173  | 00.173  |
| 0.50   | 0.25      | 0.10    | 0.14  | 00.153  | 00.152  |
| 0.50   | 0.25      | 0.10    | 0.16  | 00.136  | 00.136  |
| 0.50   | 0.25      | 0.10    | 0.18  | 00.123  | 00.123  |
| 0.50   | 0.25      | 0.10    | 0.20  | 00.112  | 00.112  |
| 0.50   | 0.25      | 0.10    | 0.40  | 00.059  | 00.059  |
| 0.50   | 0.25      | 0.10    | 0.60  | 00.040  | 00.040  |
| 0.50   | 0.25      | 0.10    | 0.80  | 00.030  | 00.030  |
| 0.50   | 0.25      | 0.10    | 0.90  | 00.027  | 00.027  |
| 0.50   | 0.25      | 0.10    | 0.94  | 00.026  | 00.026  |
| 0.50   | 0.25      | 0.10    | 0.98  | 00.025  | 00.025  |
| 0.50   | 0.25      | 0.10    | 1.00  | 00.024  | 00.024  |
| 0.50   | 0.25      | 0.20    | 0.06  | 00.644  | 00.641  |
| 0.50   | 0.25      | 0.20    | 0.10  | 00.446  | 00.444  |
| 0.50   | 0.25      | 0.20    | 0.14  | 00.339  | 00.338  |
| 0.50   | 0.25      | 0.20    | 0.18  | 00.273  | 00.273  |
| 0.50   | 0.25      | 0.20    | 0.20  | 00.249  | 00.249  |
| 0.50   | 0.25      | 0.20    | 0.24  | 00.212  | 00.211  |
| 0.50   | 0.25      | 0.20    | 0.28  | 00.184  | 00.184  |
| 0.50   | 0.25      | 0.20    | 0.32  | 00.162  | 00.162  |
| 0.50   | 0.25      | 0.20    | 0.40  | 00.132  | 00.132  |
| 0.50   | 0.25      | 0.20    | 0.60  | 00.089  | 00.089  |
| 0.50   | 0.25      | 0.20    | 0.80  | 00.068  | 00.068  |
| 0.50   | 0.25      | 0.20    | 0.90  | 00.060  | 00.060  |
| 0.50   | 0.25      | 0.20    | 0.94  | 00.058  | 00.058  |
| 0.50   | 0.25      | 0.20    | 0.98  | 00.055  | 00.055  |
| 0.50   | 0.25      | 0.20    | 1.00  | 00.054  | 00.054  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_\ell^*$ | $I_r^*$ |
|--------|-----------|---------|-------|------------|---------|
| 0.50   | 0.25      | 0.40    | 0.06  | 01.355     | 01.358  |
| 0.50   | 0.25      | 0.40    | 0.10  | 00.944     | 00.941  |
| 0.50   | 0.25      | 0.40    | 0.20  | 00.528     | 00.527  |
| 0.50   | 0.25      | 0.40    | 0.28  | 00.390     | 00.389  |
| 0.50   | 0.25      | 0.40    | 0.32  | 00.345     | 00.344  |
| 0.50   | 0.25      | 0.40    | 0.36  | 00.309     | 00.309  |
| 0.50   | 0.25      | 0.40    | 0.40  | 00.280     | 00.280  |
| 0.50   | 0.25      | 0.40    | 0.44  | 00.255     | 00.255  |
| 0.50   | 0.25      | 0.40    | 0.52  | 00.218     | 00.218  |
| 0.50   | 0.25      | 0.40    | 0.60  | 00.190     | 00.190  |
| 0.50   | 0.25      | 0.40    | 0.80  | 00.144     | 00.144  |
| 0.50   | 0.25      | 0.40    | 0.90  | 00.128     | 00.128  |
| 0.50   | 0.25      | 0.40    | 0.94  | 00.123     | 00.123  |
| 0.50   | 0.25      | 0.40    | 0.98  | 00.118     | 00.118  |
| 0.50   | 0.25      | 0.40    | 1.00  | 00.115     | 00.115  |
| 0.50   | 0.25      | 0.60    | 0.06  | 02.088     | 02.078  |
| 0.50   | 0.25      | 0.60    | 0.10  | 01.445     | 01.441  |
| 0.50   | 0.25      | 0.60    | 0.20  | 00.808     | 00.807  |
| 0.50   | 0.25      | 0.60    | 0.40  | 00.428     | 00.428  |
| 0.50   | 0.25      | 0.60    | 0.52  | 00.354     | 00.354  |
| 0.50   | 0.25      | 0.60    | 0.56  | 00.311     | 00.311  |
| 0.50   | 0.25      | 0.60    | 0.60  | 00.291     | 00.291  |
| 0.50   | 0.25      | 0.60    | 0.64  | 00.273     | 00.273  |
| 0.50   | 0.25      | 0.60    | 0.68  | 00.258     | 00.258  |
| 0.50   | 0.25      | 0.60    | 0.72  | 00.244     | 00.244  |
| 0.50   | 0.25      | 0.60    | 0.80  | 00.220     | 00.220  |
| 0.50   | 0.25      | 0.60    | 0.90  | 00.195     | 00.196  |
| 0.50   | 0.25      | 0.60    | 0.94  | 00.188     | 00.188  |
| 0.50   | 0.25      | 0.60    | 0.98  | 00.180     | 00.181  |
| 0.50   | 0.25      | 0.60    | 1.00  | 00.177     | 00.177  |
| 0.50   | 0.25      | 0.80    | 0.06  | 02.813     | 02.799  |
| 0.50   | 0.25      | 0.80    | 0.10  | 01.946     | 01.940  |
| 0.50   | 0.25      | 0.80    | 0.20  | 01.084     | 01.087  |
| 0.50   | 0.25      | 0.80    | 0.40  | 00.577     | 00.576  |
| 0.50   | 0.25      | 0.80    | 0.50  | 00.392     | 00.392  |
| 0.50   | 0.25      | 0.80    | 0.68  | 00.347     | 00.347  |
| 0.50   | 0.25      | 0.80    | 0.72  | 00.329     | 00.329  |
| 0.50   | 0.25      | 0.80    | 0.76  | 00.312     | 00.312  |
| 0.50   | 0.25      | 0.80    | 0.80  | 00.297     | 00.297  |
| 0.50   | 0.25      | 0.80    | 0.84  | 00.283     | 00.283  |
| 0.50   | 0.25      | 0.80    | 0.88  | 00.270     | 00.270  |
| 0.50   | 0.25      | 0.80    | 0.90  | 00.264     | 00.265  |
| 0.50   | 0.25      | 0.80    | 0.94  | 00.253     | 00.254  |
| 0.50   | 0.25      | 0.80    | 0.98  | 00.243     | 00.245  |
| 0.50   | 0.25      | 0.80    | 1.00  | 00.235     | 00.239  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 050    | 025       | 090     | 006   | 03175   | 03160   |
| 050    | 025       | 090     | 010   | 02197   | 02190   |
| 050    | 025       | 090     | 020   | 01229   | 01228   |
| 050    | 025       | 090     | 040   | 00651   | 00651   |
| 050    | 025       | 090     | 060   | 00442   | 00442   |
| 050    | 025       | 090     | 080   | 00335   | 00335   |
| 050    | 025       | 090     | 084   | 00319   | 00320   |
| 050    | 025       | 090     | 088   | 00305   | 00305   |
| 050    | 025       | 090     | 090   | 00299   | 00299   |
| 050    | 025       | 090     | 092   | 00292   | 00292   |
| 050    | 025       | 090     | 094   | 00286   | 00286   |
| 050    | 025       | 090     | 096   | 00280   | 00281   |
| 050    | 025       | 090     | 098   | 00275   | 00275   |
| 050    | 025       | 090     | 100   | 00269   | 00270   |
| 050    | 025       | 094     | 006   | 03320   | 03304   |
| 050    | 025       | 094     | 010   | 02297   | 02290   |
| 050    | 025       | 094     | 020   | 01285   | 01284   |
| 050    | 025       | 094     | 040   | 00681   | 00681   |
| 050    | 025       | 094     | 060   | 00463   | 00463   |
| 050    | 025       | 094     | 080   | 00350   | 00350   |
| 050    | 025       | 094     | 084   | 00334   | 00334   |
| 050    | 025       | 094     | 088   | 00319   | 00319   |
| 050    | 025       | 094     | 090   | 00312   | 00312   |
| 050    | 025       | 094     | 092   | 00306   | 00306   |
| 050    | 025       | 094     | 094   | 00299   | 00299   |
| 050    | 025       | 094     | 096   | 00293   | 00293   |
| 050    | 025       | 094     | 098   | 00287   | 00287   |
| 050    | 025       | 094     | 100   | 00282   | 00282   |
| 050    | 025       | 098     | 006   | 03465   | 03448   |
| 050    | 025       | 098     | 010   | 02397   | 02390   |
| 050    | 025       | 098     | 020   | 01341   | 01340   |
| 050    | 025       | 098     | 040   | 00710   | 00710   |
| 050    | 025       | 098     | 060   | 00483   | 00483   |
| 050    | 025       | 098     | 080   | 00365   | 00366   |
| 050    | 025       | 098     | 084   | 00348   | 00349   |
| 050    | 025       | 098     | 088   | 00333   | 00333   |
| 050    | 025       | 098     | 090   | 00326   | 00326   |
| 050    | 025       | 098     | 092   | 00319   | 00319   |
| 050    | 025       | 098     | 094   | 00312   | 00313   |
| 050    | 025       | 098     | 096   | 00306   | 00306   |
| 050    | 025       | 098     | 098   | 00300   | 00300   |
| 050    | 025       | 098     | 100   | 00294   | 00294   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_p^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.50   | 0.25      | 1.00    | 0.06  | 0.3538  | 0.3521  |
| 0.50   | 0.25      | 1.00    | 0.10  | 0.2447  | 0.2440  |
| 0.50   | 0.25      | 1.00    | 0.20  | 0.1369  | 0.1368  |
| 0.50   | 0.25      | 1.00    | 0.40  | 0.0725  | 0.0725  |
| 0.50   | 0.25      | 1.00    | 0.60  | 0.0493  | 0.0493  |
| 0.50   | 0.25      | 1.00    | 0.80  | 0.0373  | 0.0373  |
| 0.50   | 0.25      | 1.00    | 0.84  | 0.0356  | 0.0356  |
| 0.50   | 0.25      | 1.00    | 0.86  | 0.0340  | 0.0340  |
| 0.50   | 0.25      | 1.00    | 0.90  | 0.0333  | 0.0333  |
| 0.50   | 0.25      | 1.00    | 0.92  | 0.0326  | 0.0326  |
| 0.50   | 0.25      | 1.00    | 0.94  | 0.0319  | 0.0319  |
| 0.50   | 0.25      | 1.00    | 0.96  | 0.0312  | 0.0313  |
| 0.50   | 0.25      | 1.00    | 0.98  | 0.0306  | 0.0306  |
| 0.50   | 0.25      | 1.00    | 1.00  | 0.0300  | 0.0300  |
| 0.50   | 0.50      | 0.02    | 0.02  | 0.0128  | 0.0126  |
| 0.50   | 0.50      | 0.02    | 0.04  | 0.0097  | 0.0097  |
| 0.50   | 0.50      | 0.02    | 0.06  | 0.0077  | 0.0076  |
| 0.50   | 0.50      | 0.02    | 0.08  | 0.0063  | 0.0062  |
| 0.50   | 0.50      | 0.02    | 0.10  | 0.0053  | 0.0053  |
| 0.50   | 0.50      | 0.02    | 0.12  | 0.0046  | 0.0046  |
| 0.50   | 0.50      | 0.02    | 0.20  | 0.0029  | 0.0029  |
| 0.50   | 0.50      | 0.02    | 0.40  | 0.0015  | 0.0015  |
| 0.50   | 0.50      | 0.02    | 0.60  | 0.0010  | 0.0010  |
| 0.50   | 0.50      | 0.02    | 0.80  | 0.0008  | 0.0008  |
| 0.50   | 0.50      | 0.02    | 0.90  | 0.0007  | 0.0007  |
| 0.50   | 0.50      | 0.02    | 0.94  | 0.0006  | 0.0006  |
| 0.50   | 0.50      | 0.02    | 0.98  | 0.0006  | 0.0006  |
| 0.50   | 0.50      | 0.02    | 1.00  | 0.0006  | 0.0006  |
| 0.50   | 0.50      | 0.10    | 0.06  | 0.0588  | 0.0585  |
| 0.50   | 0.50      | 0.10    | 0.08  | 0.0481  | 0.0480  |
| 0.50   | 0.50      | 0.10    | 0.10  | 0.0407  | 0.0405  |
| 0.50   | 0.50      | 0.10    | 0.12  | 0.0351  | 0.0351  |
| 0.50   | 0.50      | 0.10    | 0.14  | 0.0309  | 0.0309  |
| 0.50   | 0.50      | 0.10    | 0.16  | 0.0276  | 0.0276  |
| 0.50   | 0.50      | 0.10    | 0.18  | 0.0249  | 0.0249  |
| 0.50   | 0.50      | 0.10    | 0.20  | 0.0227  | 0.0227  |
| 0.50   | 0.50      | 0.10    | 0.40  | 0.0120  | 0.0120  |
| 0.50   | 0.50      | 0.10    | 0.60  | 0.0082  | 0.0082  |
| 0.50   | 0.50      | 0.10    | 0.80  | 0.0062  | 0.0062  |
| 0.50   | 0.50      | 0.10    | 0.90  | 0.0055  | 0.0055  |
| 0.50   | 0.50      | 0.10    | 0.94  | 0.0053  | 0.0053  |
| 0.50   | 0.50      | 0.10    | 0.98  | 0.0050  | 0.0051  |
| 0.50   | 0.50      | 0.10    | 1.00  | 0.0049  | 0.0050  |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\lambda}^*$ | $I_{\tau}^*$ |
|--------|-----------|---------|-------|-----------------|--------------|
| 0.50   | 0.50      | 0.20    | 0.06  | 01304           | 01298        |
| 0.50   | 0.50      | 0.20    | 0.10  | 00902           | 00899        |
| 0.50   | 0.50      | 0.20    | 0.14  | 00687           | 00685        |
| 0.50   | 0.50      | 0.20    | 0.18  | 00554           | 00553        |
| 0.50   | 0.50      | 0.20    | 0.20  | 00505           | 00504        |
| 0.50   | 0.50      | 0.20    | 0.24  | 00429           | 00428        |
| 0.50   | 0.50      | 0.20    | 0.28  | 00372           | 00372        |
| 0.50   | 0.50      | 0.20    | 0.32  | 00329           | 00329        |
| 0.50   | 0.50      | 0.20    | 0.40  | 00267           | 00267        |
| 0.50   | 0.50      | 0.20    | 0.60  | 00181           | 00181        |
| 0.50   | 0.50      | 0.20    | 0.80  | 00137           | 00137        |
| 0.50   | 0.50      | 0.20    | 0.90  | 00122           | 00122        |
| 0.50   | 0.50      | 0.20    | 0.94  | 00117           | 00117        |
| 0.50   | 0.50      | 0.20    | 0.98  | 00113           | 00113        |
| 0.50   | 0.50      | 0.20    | 1.00  | 00110           | 00110        |
| 0.50   | 0.50      | 0.40    | 0.06  | 02762           | 02748        |
| 0.50   | 0.50      | 0.40    | 0.10  | 01911           | 01905        |
| 0.50   | 0.50      | 0.40    | 0.20  | 01069           | 01068        |
| 0.50   | 0.50      | 0.40    | 0.28  | 00789           | 00788        |
| 0.50   | 0.50      | 0.40    | 0.32  | 00698           | 00697        |
| 0.50   | 0.50      | 0.40    | 0.36  | 00625           | 00625        |
| 0.50   | 0.50      | 0.40    | 0.40  | 00566           | 00566        |
| 0.50   | 0.50      | 0.40    | 0.44  | 00517           | 00517        |
| 0.50   | 0.50      | 0.40    | 0.52  | 00441           | 00441        |
| 0.50   | 0.50      | 0.40    | 0.60  | 00385           | 00385        |
| 0.50   | 0.50      | 0.40    | 0.80  | 00291           | 00291        |
| 0.50   | 0.50      | 0.40    | 0.90  | 00260           | 00260        |
| 0.50   | 0.50      | 0.40    | 0.94  | 00249           | 00249        |
| 0.50   | 0.50      | 0.40    | 0.98  | 00239           | 00239        |
| 0.50   | 0.50      | 0.40    | 1.00  | 00234           | 00234        |
| 0.50   | 0.50      | 0.60    | 0.06  | 04226           | 04205        |
| 0.50   | 0.50      | 0.60    | 0.10  | 02923           | 02911        |
| 0.50   | 0.50      | 0.60    | 0.20  | 01636           | 01634        |
| 0.50   | 0.50      | 0.60    | 0.40  | 00866           | 00866        |
| 0.50   | 0.50      | 0.60    | 0.52  | 00675           | 00675        |
| 0.50   | 0.50      | 0.60    | 0.56  | 00629           | 00629        |
| 0.50   | 0.50      | 0.60    | 0.60  | 00589           | 00589        |
| 0.50   | 0.50      | 0.60    | 0.64  | 00553           | 00553        |
| 0.50   | 0.50      | 0.60    | 0.68  | 00522           | 00522        |
| 0.50   | 0.50      | 0.60    | 0.72  | 00494           | 00494        |
| 0.50   | 0.50      | 0.60    | 0.80  | 00446           | 00446        |
| 0.50   | 0.50      | 0.60    | 0.90  | 00397           | 00398        |
| 0.50   | 0.50      | 0.60    | 0.94  | 00381           | 00381        |
| 0.50   | 0.50      | 0.60    | 0.98  | 00366           | 00366        |
| 0.50   | 0.50      | 0.60    | 1.00  | 00359           | 00359        |



TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_p^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.50   | 0.50      | 0.80    | 0.06  | 0.5691  | 0.5664  |
| 0.50   | 0.50      | 0.80    | 0.10  | 0.3937  | 0.3926  |
| 0.50   | 0.50      | 0.80    | 0.20  | 0.2203  | 0.2200  |
| 0.50   | 0.50      | 0.80    | 0.40  | 0.1167  | 0.1167  |
| 0.50   | 0.50      | 0.80    | 0.60  | 0.0793  | 0.0793  |
| 0.50   | 0.50      | 0.80    | 0.68  | 0.0703  | 0.0703  |
| 0.50   | 0.50      | 0.80    | 0.72  | 0.0665  | 0.0665  |
| 0.50   | 0.50      | 0.80    | 0.76  | 0.0651  | 0.0632  |
| 0.50   | 0.50      | 0.80    | 0.80  | 0.0601  | 0.0601  |
| 0.50   | 0.50      | 0.80    | 0.84  | 0.0573  | 0.0573  |
| 0.50   | 0.50      | 0.80    | 0.88  | 0.0547  | 0.0548  |
| 0.50   | 0.50      | 0.80    | 0.90  | 0.0535  | 0.0536  |
| 0.50   | 0.50      | 0.80    | 0.94  | 0.0513  | 0.0514  |
| 0.50   | 0.50      | 0.80    | 0.98  | 0.0493  | 0.0493  |
| 0.50   | 0.50      | 0.80    | 1.00  | 0.0483  | 0.0483  |
| 0.50   | 0.50      | 0.90    | 0.06  | 0.6424  | 0.6393  |
| 0.50   | 0.50      | 0.90    | 0.10  | 0.4445  | 0.4432  |
| 0.50   | 0.50      | 0.90    | 0.20  | 0.2487  | 0.2484  |
| 0.50   | 0.50      | 0.90    | 0.40  | 0.1318  | 0.1317  |
| 0.50   | 0.50      | 0.90    | 0.60  | 0.0895  | 0.0896  |
| 0.50   | 0.50      | 0.90    | 0.80  | 0.0678  | 0.0678  |
| 0.50   | 0.50      | 0.90    | 0.84  | 0.0646  | 0.0647  |
| 0.50   | 0.50      | 0.90    | 0.88  | 0.0618  | 0.0618  |
| 0.50   | 0.50      | 0.90    | 0.90  | 0.0604  | 0.0605  |
| 0.50   | 0.50      | 0.90    | 0.92  | 0.0592  | 0.0592  |
| 0.50   | 0.50      | 0.90    | 0.94  | 0.0579  | 0.0580  |
| 0.50   | 0.50      | 0.90    | 0.96  | 0.0568  | 0.0568  |
| 0.50   | 0.50      | 0.90    | 0.98  | 0.0556  | 0.0557  |
| 0.50   | 0.50      | 0.90    | 1.00  | 0.0545  | 0.0546  |
| 0.50   | 0.50      | 0.94    | 0.06  | 0.6718  | 0.6685  |
| 0.50   | 0.50      | 0.94    | 0.10  | 0.4648  | 0.4634  |
| 0.50   | 0.50      | 0.94    | 0.20  | 0.2601  | 0.2597  |
| 0.50   | 0.50      | 0.94    | 0.40  | 0.1378  | 0.1377  |
| 0.50   | 0.50      | 0.94    | 0.60  | 0.0936  | 0.0937  |
| 0.50   | 0.50      | 0.94    | 0.80  | 0.0709  | 0.0709  |
| 0.50   | 0.50      | 0.94    | 0.84  | 0.0676  | 0.0676  |
| 0.50   | 0.50      | 0.94    | 0.88  | 0.0646  | 0.0647  |
| 0.50   | 0.50      | 0.94    | 0.90  | 0.0632  | 0.0633  |
| 0.50   | 0.50      | 0.94    | 0.92  | 0.0619  | 0.0619  |
| 0.50   | 0.50      | 0.94    | 0.94  | 0.0606  | 0.0606  |
| 0.50   | 0.50      | 0.94    | 0.96  | 0.0593  | 0.0594  |
| 0.50   | 0.50      | 0.94    | 0.98  | 0.0582  | 0.0582  |
| 0.50   | 0.50      | 0.94    | 1.00  | 0.0570  | 0.0571  |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$     | $I_r^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 0 50   | 0 50      | 0 98    | 0 0 6 | 0 7 0 1 1 | 0 6 9 7 7 |
| 0 50   | 0 50      | 0 98    | 0 1 0 | 0 4 8 5 0 | 0 4 8 3 7 |
| 0 50   | 0 50      | 0 98    | 0 2 0 | 0 2 7 1 4 | 0 2 7 1 1 |
| 0 50   | 0 50      | 0 98    | 0 4 0 | 0 1 4 3 8 | 0 1 4 3 7 |
| 0 50   | 0 50      | 0 98    | 0 6 0 | 0 0 9 7 7 | 0 0 9 7 7 |
| 0 50   | 0 50      | 0 98    | 0 8 0 | 0 0 7 4 0 | 0 0 7 4 0 |
| 0 50   | 0 50      | 0 98    | 0 8 4 | 0 0 7 0 6 | 0 0 7 0 6 |
| 0 50   | 0 50      | 0 98    | 0 8 8 | 0 0 6 7 4 | 0 0 6 7 5 |
| 0 50   | 0 50      | 0 98    | 0 9 0 | 0 0 6 6 0 | 0 0 6 6 0 |
| 0 50   | 0 50      | 0 98    | 0 9 2 | 0 0 6 4 6 | 0 0 6 4 6 |
| 0 50   | 0 50      | 0 98    | 0 9 4 | 0 0 6 3 2 | 0 0 6 3 3 |
| 0 50   | 0 50      | 0 98    | 0 9 6 | 0 0 6 1 9 | 0 0 6 2 0 |
| 0 50   | 0 50      | 0 98    | 0 9 8 | 0 0 6 0 7 | 0 0 6 0 8 |
| 0 50   | 0 50      | 0 98    | 1 0 0 | 0 0 5 9 5 | 0 0 5 9 6 |
| 0 50   | 0 50      | 1 0 0   | 0 0 6 | 0 7 1 5 8 | 0 7 1 2 3 |
| 0 50   | 0 50      | 1 0 0   | 0 1 0 | 0 4 9 5 2 | 0 4 9 3 8 |
| 0 50   | 0 50      | 1 0 0   | 0 2 0 | 0 2 7 7 1 | 0 2 7 6 7 |
| 0 50   | 0 50      | 1 0 0   | 0 4 0 | 0 1 4 6 8 | 0 1 4 6 8 |
| 0 50   | 0 50      | 1 0 0   | 0 6 0 | 0 0 9 9 8 | 0 0 9 9 8 |
| 0 50   | 0 50      | 1 0 0   | 0 8 0 | 0 0 7 5 5 | 0 0 7 5 6 |
| 0 50   | 0 50      | 1 0 0   | 0 8 4 | 0 0 7 2 0 | 0 0 7 2 1 |
| 0 50   | 0 50      | 1 0 0   | 0 8 8 | 0 0 6 8 8 | 0 0 6 8 9 |
| 0 50   | 0 50      | 1 0 0   | 0 9 0 | 0 0 6 7 3 | 0 0 6 7 4 |
| 0 50   | 0 50      | 1 0 0   | 0 9 2 | 0 0 6 5 9 | 0 0 6 6 0 |
| 0 50   | 0 50      | 1 0 0   | 0 9 4 | 0 0 6 4 5 | 0 0 6 4 6 |
| 0 50   | 0 50      | 1 0 0   | 0 9 6 | 0 0 6 3 2 | 0 0 6 3 3 |
| 0 50   | 0 50      | 1 0 0   | 0 9 8 | 0 0 6 2 0 | 0 0 6 2 0 |
| 0 50   | 0 50      | 1 0 0   | 1 0 0 | 0 0 6 0 8 | 0 0 6 0 8 |
| 0 50   | 0 8 0     | 0 0 2   | 0 0 2 | 0 0 2 0 8 | 0 0 2 0 5 |
| 0 50   | 0 8 0     | 0 0 2   | 0 0 4 | 0 0 1 5 8 | 0 0 1 5 7 |
| 0 50   | 0 8 0     | 0 0 2   | 0 0 6 | 0 0 1 2 5 | 0 0 1 2 4 |
| 0 50   | 0 8 0     | 0 0 2   | 0 0 8 | 0 0 1 0 2 | 0 0 1 0 2 |
| 0 50   | 0 8 0     | 0 0 2   | 0 1 0 | 0 0 0 8 6 | 0 0 0 8 6 |
| 0 50   | 0 8 0     | 0 0 2   | 0 1 2 | 0 0 0 7 4 | 0 0 0 7 4 |
| 0 50   | 0 8 0     | 0 0 2   | 0 2 0 | 0 0 0 4 8 | 0 0 0 4 8 |
| 0 50   | 0 8 0     | 0 0 2   | 0 4 0 | 0 0 0 2 5 | 0 0 0 2 5 |
| 0 50   | 0 8 0     | 0 0 2   | 0 6 0 | 0 0 0 1 7 | 0 0 0 1 7 |
| 0 50   | 0 8 0     | 0 0 2   | 0 8 0 | 0 0 0 1 3 | 0 0 0 1 3 |
| 0 50   | 0 8 0     | 0 0 2   | 0 9 0 | 0 0 0 1 1 | 0 0 0 1 1 |
| 0 50   | 0 8 0     | 0 0 2   | 0 9 4 | 0 0 0 1 1 | 0 0 0 1 1 |
| 0 50   | 0 8 0     | 0 0 2   | 0 9 8 | 0 0 0 1 0 | 0 0 0 1 0 |
| 0 50   | 0 8 0     | 0 0 2   | 1 0 0 | 0 0 0 1 0 | 0 0 0 1 0 |

TABLE 5 Intensities (Continued)

| $\lambda$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_g^*$ | $I_r^*$ |
|-----------|-----------|---------|-------|---------|---------|
| 050       | 080       | 010     | 006   | 00954   | 00949   |
| 050       | 080       | 010     | 008   | 00781   | 00778   |
| 050       | 080       | 010     | 010   | 00660   | 00658   |
| 050       | 080       | 010     | 012   | 00571   | 00569   |
| 050       | 080       | 010     | 014   | 00502   | 00501   |
| 050       | 080       | 010     | 016   | 00448   | 00448   |
| 050       | 080       | 010     | 018   | 00405   | 00404   |
| 050       | 080       | 010     | 020   | 00369   | 00369   |
| 050       | 080       | 010     | 040   | 00195   | 00195   |
| 050       | 080       | 010     | 060   | 00133   | 00133   |
| 050       | 080       | 010     | 080   | 00100   | 00100   |
| 050       | 080       | 010     | 090   | 00089   | 00089   |
| 050       | 080       | 010     | 094   | 00086   | 00086   |
| 050       | 080       | 010     | 098   | 00082   | 00082   |
| 050       | 080       | 010     | 100   | 00081   | 00081   |
| 050       | 080       | 020     | 006   | 02116   | 02106   |
| 050       | 080       | 020     | 010   | 01464   | 01460   |
| 050       | 080       | 020     | 014   | 01114   | 01112   |
| 050       | 080       | 020     | 018   | 00899   | 00897   |
| 050       | 080       | 020     | 020   | 00819   | 00818   |
| 050       | 080       | 020     | 024   | 00696   | 00695   |
| 050       | 080       | 020     | 028   | 00605   | 00604   |
| 050       | 080       | 020     | 032   | 00534   | 00534   |
| 050       | 080       | 020     | 040   | 00434   | 00434   |
| 050       | 080       | 020     | 060   | 00295   | 00295   |
| 050       | 080       | 020     | 080   | 00223   | 00223   |
| 050       | 080       | 020     | 090   | 00199   | 00199   |
| 050       | 080       | 020     | 094   | 00191   | 00191   |
| 050       | 080       | 020     | 098   | 00183   | 00183   |
| 050       | 080       | 020     | 100   | 00179   | 00179   |
| 050       | 080       | 040     | 006   | 04481   | 04459   |
| 050       | 080       | 040     | 010   | 03100   | 03091   |
| 050       | 080       | 040     | 020   | 01735   | 01732   |
| 050       | 080       | 040     | 028   | 01281   | 01280   |
| 050       | 080       | 040     | 032   | 01132   | 01131   |
| 050       | 080       | 040     | 036   | 01014   | 01014   |
| 050       | 080       | 040     | 040   | 00919   | 00919   |
| 050       | 080       | 040     | 044   | 00840   | 00840   |
| 050       | 080       | 040     | 052   | 00716   | 00716   |
| 050       | 080       | 040     | 060   | 00624   | 00625   |
| 050       | 080       | 040     | 080   | 00473   | 00473   |
| 050       | 080       | 040     | 090   | 00421   | 00422   |
| 050       | 080       | 040     | 094   | 00404   | 00404   |
| 050       | 080       | 040     | 098   | 00388   | 00388   |
| 050       | 080       | 040     | 100   | 00380   | 00381   |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_l^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 0.50   | 0.80      | 0.60    | 0.06  | 0.6856  | 0.6823  |
| 0.50   | 0.80      | 0.60    | 0.10  | 0.4744  | 0.4730  |
| 0.50   | 0.80      | 0.60    | 0.20  | 0.2654  | 0.2651  |
| 0.50   | 0.80      | 0.60    | 0.40  | 0.1406  | 0.1406  |
| 0.50   | 0.80      | 0.60    | 0.52  | 0.1095  | 0.1096  |
| 0.50   | 0.80      | 0.60    | 0.56  | 0.1021  | 0.1021  |
| 0.50   | 0.80      | 0.60    | 0.60  | 0.0956  | 0.0956  |
| 0.50   | 0.80      | 0.60    | 0.64  | 0.0898  | 0.0898  |
| 0.50   | 0.80      | 0.60    | 0.68  | 0.0847  | 0.0847  |
| 0.50   | 0.80      | 0.60    | 0.72  | 0.0801  | 0.0802  |
| 0.50   | 0.80      | 0.60    | 0.80  | 0.0724  | 0.0724  |
| 0.50   | 0.80      | 0.60    | 0.90  | 0.0645  | 0.0646  |
| 0.50   | 0.80      | 0.60    | 0.94  | 0.0618  | 0.0619  |
| 0.50   | 0.80      | 0.60    | 0.98  | 0.0594  | 0.0594  |
| 0.50   | 0.80      | 0.60    | 1.00  | 0.0582  | 0.0583  |
| 0.50   | 0.80      | 0.80    | 0.06  | 0.9235  | 0.9190  |
| 0.50   | 0.80      | 0.80    | 0.10  | 0.6389  | 0.6370  |
| 0.50   | 0.80      | 0.80    | 0.20  | 0.3575  | 0.3570  |
| 0.50   | 0.80      | 0.80    | 0.40  | 0.1894  | 0.1893  |
| 0.50   | 0.80      | 0.80    | 0.60  | 0.1287  | 0.1288  |
| 0.50   | 0.80      | 0.80    | 0.68  | 0.1141  | 0.1141  |
| 0.50   | 0.80      | 0.80    | 0.72  | 0.1080  | 0.1080  |
| 0.50   | 0.80      | 0.80    | 0.76  | 0.1024  | 0.1025  |
| 0.50   | 0.80      | 0.80    | 0.80  | 0.0975  | 0.0975  |
| 0.50   | 0.80      | 0.80    | 0.84  | 0.0929  | 0.0930  |
| 0.50   | 0.80      | 0.80    | 0.88  | 0.0888  | 0.0889  |
| 0.50   | 0.80      | 0.80    | 0.90  | 0.0869  | 0.0870  |
| 0.50   | 0.80      | 0.80    | 0.94  | 0.0833  | 0.0834  |
| 0.50   | 0.80      | 0.80    | 0.98  | 0.0800  | 0.0800  |
| 0.50   | 0.80      | 0.80    | 1.00  | 0.0784  | 0.0785  |
| 0.50   | 0.80      | 0.90    | 0.06  | 1.0424  | 1.0373  |
| 0.50   | 0.80      | 0.90    | 0.10  | 0.7212  | 0.7191  |
| 0.50   | 0.80      | 0.90    | 0.20  | 0.4036  | 0.4030  |
| 0.50   | 0.80      | 0.90    | 0.40  | 0.2138  | 0.2137  |
| 0.50   | 0.80      | 0.90    | 0.60  | 0.1453  | 0.1453  |
| 0.50   | 0.80      | 0.90    | 0.80  | 0.1100  | 0.1101  |
| 0.50   | 0.80      | 0.90    | 0.84  | 0.1049  | 0.1050  |
| 0.50   | 0.80      | 0.90    | 0.88  | 0.1003  | 0.1003  |
| 0.50   | 0.80      | 0.90    | 0.90  | 0.0981  | 0.0982  |
| 0.50   | 0.80      | 0.90    | 0.92  | 0.0960  | 0.0961  |
| 0.50   | 0.80      | 0.90    | 0.94  | 0.0940  | 0.0941  |
| 0.50   | 0.80      | 0.90    | 0.96  | 0.0921  | 0.0922  |
| 0.50   | 0.80      | 0.90    | 0.98  | 0.0903  | 0.0904  |
| 0.50   | 0.80      | 0.90    | 1.00  | 0.0885  | 0.0886  |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$  | $I_r^*$ |
|--------|-----------|---------|-------|--------|---------|
| 0.50   | 0.80      | 0.94    | 0.06  | 1.0900 | 1.0847  |
| 0.50   | 0.80      | 0.94    | 0.10  | 0.7541 | 0.7519  |
| 0.50   | 0.80      | 0.94    | 0.20  | 0.4220 | 0.4214  |
| 0.50   | 0.80      | 0.94    | 0.40  | 0.2236 | 0.2235  |
| 0.50   | 0.80      | 0.94    | 0.60  | 0.1519 | 0.1520  |
| 0.50   | 0.80      | 0.94    | 0.80  | 0.1150 | 0.1151  |
| 0.50   | 0.80      | 0.94    | 0.84  | 0.1097 | 0.1098  |
| 0.50   | 0.80      | 0.94    | 0.88  | 0.1049 | 0.1049  |
| 0.50   | 0.80      | 0.94    | 0.90  | 0.1026 | 0.1027  |
| 0.50   | 0.80      | 0.94    | 0.92  | 0.1004 | 0.1005  |
| 0.50   | 0.80      | 0.94    | 0.94  | 0.0983 | 0.0984  |
| 0.50   | 0.80      | 0.94    | 0.96  | 0.0963 | 0.0964  |
| 0.50   | 0.80      | 0.94    | 0.98  | 0.0944 | 0.0945  |
| 0.50   | 0.80      | 0.94    | 1.00  | 0.0926 | 0.0926  |
| 0.50   | 0.80      | 0.98    | 0.06  | 1.1376 | 1.1321  |
| 0.50   | 0.80      | 0.98    | 0.10  | 0.7870 | 0.7848  |
| 0.50   | 0.80      | 0.98    | 0.20  | 0.4404 | 0.4398  |
| 0.50   | 0.80      | 0.98    | 0.40  | 0.2333 | 0.2333  |
| 0.50   | 0.80      | 0.98    | 0.60  | 0.1586 | 0.1586  |
| 0.50   | 0.80      | 0.98    | 0.80  | 0.1201 | 0.1201  |
| 0.50   | 0.80      | 0.98    | 0.84  | 0.1145 | 0.1146  |
| 0.50   | 0.80      | 0.98    | 0.88  | 0.1094 | 0.1095  |
| 0.50   | 0.80      | 0.98    | 0.90  | 0.1071 | 0.1071  |
| 0.50   | 0.80      | 0.98    | 0.92  | 0.1048 | 0.1049  |
| 0.50   | 0.80      | 0.98    | 0.94  | 0.1026 | 0.1027  |
| 0.50   | 0.80      | 0.98    | 0.96  | 0.1005 | 0.1006  |
| 0.50   | 0.80      | 0.98    | 0.98  | 0.0985 | 0.0986  |
| 0.50   | 0.80      | 0.98    | 1.00  | 0.0966 | 0.0967  |
| 0.50   | 0.80      | 1.00    | 0.06  | 1.1614 | 1.1557  |
| 0.50   | 0.80      | 1.00    | 0.10  | 0.8035 | 0.8012  |
| 0.50   | 0.80      | 1.00    | 0.20  | 0.4496 | 0.4490  |
| 0.50   | 0.80      | 1.00    | 0.40  | 0.2382 | 0.2381  |
| 0.50   | 0.80      | 1.00    | 0.60  | 0.1619 | 0.1619  |
| 0.50   | 0.80      | 1.00    | 0.80  | 0.1226 | 0.1227  |
| 0.50   | 0.80      | 1.00    | 0.84  | 0.1169 | 0.1170  |
| 0.50   | 0.80      | 1.00    | 0.88  | 0.1117 | 0.1118  |
| 0.50   | 0.80      | 1.00    | 0.90  | 0.1093 | 0.1094  |
| 0.50   | 0.80      | 1.00    | 0.92  | 0.1070 | 0.1071  |
| 0.50   | 0.80      | 1.00    | 0.94  | 0.1048 | 0.1048  |
| 0.50   | 0.80      | 1.00    | 0.96  | 0.1026 | 0.1027  |
| 0.50   | 0.80      | 1.00    | 0.98  | 0.1006 | 0.1007  |
| 0.50   | 0.80      | 1.00    | 1.00  | 0.0986 | 0.0987  |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$     | $I_r^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 1 0 0  | 0 2 5     | 0 0 2   | 0 0 2 | 0 0 0 6 4 | 0 0 0 6 2 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 0 4 | 0 0 0 5 7 | 0 0 0 5 6 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 0 6 | 0 0 0 4 9 | 0 0 0 4 9 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 0 8 | 0 0 0 4 3 | 0 0 0 4 2 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 1 0 | 0 0 0 3 8 | 0 0 0 3 7 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 1 2 | 0 0 0 3 3 | 0 0 0 3 3 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 2 0 | 0 0 0 2 3 | 0 0 0 2 3 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 4 0 | 0 0 0 1 3 | 0 0 0 1 3 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 6 0 | 0 0 0 0 9 | 0 0 0 0 9 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 8 0 | 0 0 0 0 6 | 0 0 0 0 6 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 9 0 | 0 0 0 0 6 | 0 0 0 0 6 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 9 4 | 0 0 0 0 5 | 0 0 0 0 5 |
| 1 0 0  | 0 2 5     | 0 0 2   | 0 9 8 | 0 0 0 0 5 | 0 0 0 0 5 |
| 1 0 0  | 0 2 5     | 0 0 2   | 1 0 0 | 0 0 0 0 5 | 0 0 0 0 5 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 0 6 | 0 0 3 6 6 | 0 0 3 6 1 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 0 8 | 0 0 3 1 8 | 0 0 3 1 5 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 1 0 | 0 0 2 8 0 | 0 0 2 7 8 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 1 2 | 0 0 2 4 9 | 0 0 2 4 8 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 1 4 | 0 0 2 2 4 | 0 0 2 2 3 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 1 6 | 0 0 2 0 4 | 0 0 2 0 3 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 1 8 | 0 0 1 8 6 | 0 0 1 8 6 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 2 0 | 0 0 1 7 2 | 0 0 1 7 1 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 4 0 | 0 0 0 9 6 | 0 0 0 9 5 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 6 0 | 0 0 0 6 6 | 0 0 0 6 6 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 8 0 | 0 0 0 5 0 | 0 0 0 5 0 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 9 0 | 0 0 0 4 5 | 0 0 0 4 5 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 9 4 | 0 0 0 4 3 | 0 0 0 4 3 |
| 1 0 0  | 0 2 5     | 0 1 0   | 0 9 8 | 0 0 0 4 1 | 0 0 0 4 1 |
| 1 0 0  | 0 2 5     | 0 1 0   | 1 0 0 | 0 0 0 4 1 | 0 0 0 4 1 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 0 6 | 0 0 8 6 6 | 0 0 8 5 5 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 1 0 | 0 0 6 6 4 | 0 0 6 5 8 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 1 4 | 0 0 5 3 2 | 0 0 5 2 9 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 1 8 | 0 0 4 4 2 | 0 0 4 4 0 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 2 0 | 0 0 4 0 7 | 0 0 4 0 6 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 2 4 | 0 0 3 5 2 | 0 0 3 5 1 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 2 8 | 0 0 3 0 9 | 0 0 3 0 9 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 3 2 | 0 0 2 7 6 | 0 0 2 7 6 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 4 0 | 0 0 2 2 7 | 0 0 2 2 7 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 6 0 | 0 0 1 5 7 | 0 0 1 5 7 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 8 0 | 0 0 1 2 0 | 0 0 1 2 0 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 9 0 | 0 0 1 0 7 | 0 0 1 0 7 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 9 4 | 0 0 1 0 3 | 0 0 1 0 3 |
| 1 0 0  | 0 2 5     | 0 2 0   | 0 9 8 | 0 0 0 9 9 | 0 0 0 9 9 |
| 1 0 0  | 0 2 5     | 0 2 0   | 1 0 0 | 0 0 0 9 7 | 0 0 0 9 7 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$   | $I_r^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 1 00   | 0 2 5     | 0 4 0   | 0 0 6 | 0 1 9 2 3 | 0 1 8 9 8 |
| 1 00   | 0 2 5     | 0 4 0   | 0 1 0 | 0 1 4 7 4 | 0 1 4 6 2 |
| 1 00   | 0 2 5     | 0 4 0   | 0 2 0 | 0 0 9 0 4 | 0 0 9 0 1 |
| 1 00   | 0 2 5     | 0 4 0   | 0 2 8 | 0 0 6 8 7 | 0 0 6 8 6 |
| 1 00   | 0 2 5     | 0 4 0   | 0 3 2 | 0 0 6 1 3 | 0 0 6 1 2 |
| 1 00   | 0 2 5     | 0 4 0   | 0 3 6 | 0 0 5 5 3 | 0 0 5 5 3 |
| 1 00   | 0 2 5     | 0 4 0   | 0 4 0 | 0 0 5 0 4 | 0 0 5 0 4 |
| 1 00   | 0 2 5     | 0 4 0   | 0 4 4 | 0 0 4 6 3 | 0 0 4 6 3 |
| 1 00   | 0 2 5     | 0 4 0   | 0 5 2 | 0 0 3 9 8 | 0 0 3 9 8 |
| 1 00   | 0 2 5     | 0 4 0   | 0 6 0 | 0 0 3 4 9 | 0 0 3 4 9 |
| 1 00   | 0 2 5     | 0 4 0   | 0 8 0 | 0 0 2 6 6 | 0 0 2 6 7 |
| 1 00   | 0 2 5     | 0 4 0   | 0 9 0 | 0 0 2 3 8 | 0 0 2 3 9 |
| 1 00   | 0 2 5     | 0 4 0   | 0 9 4 | 0 0 2 2 8 | 0 0 2 2 9 |
| 1 00   | 0 2 5     | 0 4 0   | 0 9 8 | 0 0 2 1 9 | 0 0 2 2 0 |
| 1 00   | 0 2 5     | 0 4 0   | 1 0 0 | 0 0 2 1 5 | 0 0 2 1 6 |
| 1 00   | 0 2 5     | 0 6 0   | 0 0 6 | 0 2 9 9 6 | 0 2 9 5 7 |
| 1 00   | 0 2 5     | 0 6 0   | 0 1 0 | 0 2 2 9 6 | 0 2 2 7 8 |
| 1 00   | 0 2 5     | 0 6 0   | 0 2 0 | 0 1 4 0 9 | 0 1 4 0 4 |
| 1 00   | 0 2 5     | 0 6 0   | 0 4 0 | 0 0 7 8 6 | 0 0 7 8 5 |
| 1 00   | 0 2 5     | 0 6 0   | 0 5 2 | 0 0 6 2 0 | 0 0 6 2 0 |
| 1 00   | 0 2 5     | 0 6 0   | 0 5 6 | 0 0 5 7 9 | 0 0 5 7 9 |
| 1 00   | 0 2 5     | 0 6 0   | 0 6 0 | 0 0 5 4 3 | 0 0 5 4 4 |
| 1 00   | 0 2 5     | 0 6 0   | 0 6 4 | 0 0 5 1 2 | 0 0 5 1 2 |
| 1 00   | 0 2 5     | 0 6 0   | 0 6 8 | 0 0 4 8 3 | 0 0 4 8 4 |
| 1 00   | 0 2 5     | 0 6 0   | 0 7 2 | 0 0 4 5 8 | 0 0 4 5 9 |
| 1 00   | 0 2 5     | 0 6 0   | 0 8 0 | 0 0 4 1 5 | 0 0 4 1 6 |
| 1 00   | 0 2 5     | 0 6 0   | 0 9 0 | 0 0 3 7 1 | 0 0 3 7 2 |
| 1 00   | 0 2 5     | 0 6 0   | 0 9 4 | 0 0 3 5 6 | 0 0 3 5 7 |
| 1 00   | 0 2 5     | 0 6 0   | 0 9 8 | 0 0 3 4 2 | 0 0 3 4 3 |
| 1 00   | 0 2 5     | 0 6 0   | 1 0 0 | 0 0 3 3 5 | 0 0 3 3 6 |
| 1 00   | 0 2 5     | 0 8 0   | 0 0 6 | 0 4 0 7 3 | 0 4 0 2 1 |
| 1 00   | 0 2 5     | 0 8 0   | 0 1 0 | 0 3 1 2 1 | 0 3 0 9 7 |
| 1 00   | 0 2 5     | 0 8 0   | 0 2 0 | 0 1 9 1 6 | 0 1 9 0 9 |
| 1 00   | 0 2 5     | 0 8 0   | 0 4 0 | 0 1 0 6 8 | 0 1 0 6 8 |
| 1 00   | 0 2 5     | 0 8 0   | 0 6 0 | 0 0 7 3 9 | 0 0 7 3 9 |
| 1 00   | 0 2 5     | 0 8 0   | 0 6 8 | 0 0 6 5 7 | 0 0 6 5 8 |
| 1 00   | 0 2 5     | 0 8 0   | 0 7 2 | 0 0 6 2 3 | 0 0 6 2 4 |
| 1 00   | 0 2 5     | 0 8 0   | 0 7 6 | 0 0 5 9 2 | 0 0 5 9 3 |
| 1 00   | 0 2 5     | 0 8 0   | 0 8 0 | 0 0 5 6 4 | 0 0 5 6 5 |
| 1 00   | 0 2 5     | 0 8 0   | 0 8 4 | 0 0 5 3 9 | 0 0 5 4 0 |
| 1 00   | 0 2 5     | 0 8 0   | 0 8 8 | 0 0 5 1 5 | 0 0 5 1 7 |
| 1 00   | 0 2 5     | 0 8 0   | 0 9 0 | 0 0 5 0 4 | 0 0 5 0 6 |
| 1 00   | 0 2 5     | 0 8 0   | 0 9 4 | 0 0 4 8 4 | 0 0 4 8 5 |
| 1 00   | 0 2 5     | 0 8 0   | 0 9 8 | 0 0 4 6 5 | 0 0 4 6 6 |
| 1 00   | 0 2 5     | 0 8 0   | 1 0 0 | 0 0 4 5 6 | 0 0 4 5 7 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\ell}^*$ | $I_r^*$ |
|--------|-----------|---------|-------|--------------|---------|
| 100    | 025       | 090     | 006   | 04613        | 04553   |
| 100    | 025       | 090     | 010   | 03535        | 03507   |
| 100    | 025       | 090     | 020   | 02170        | 02162   |
| 100    | 025       | 090     | 040   | 01210        | 01209   |
| 100    | 025       | 090     | 060   | 00837        | 00837   |
| 100    | 025       | 090     | 080   | 00639        | 00640   |
| 100    | 025       | 090     | 084   | 00610        | 00611   |
| 100    | 025       | 090     | 088   | 00584        | 00585   |
| 100    | 025       | 090     | 090   | 00571        | 00573   |
| 100    | 025       | 090     | 092   | 00559        | 00561   |
| 100    | 025       | 090     | 094   | 00548        | 00550   |
| 100    | 025       | 090     | 096   | 00537        | 00539   |
| 100    | 025       | 090     | 098   | 00527        | 00528   |
| 100    | 025       | 090     | 100   | 00517        | 00518   |
| 100    | 025       | 094     | 006   | 04829        | 04766   |
| 100    | 025       | 094     | 010   | 03700        | 03671   |
| 100    | 025       | 094     | 020   | 02271        | 02263   |
| 100    | 025       | 094     | 040   | 01266        | 01266   |
| 100    | 025       | 094     | 060   | 00876        | 00877   |
| 100    | 025       | 094     | 080   | 00669        | 00670   |
| 100    | 025       | 094     | 084   | 00639        | 00640   |
| 100    | 025       | 094     | 088   | 00611        | 00612   |
| 100    | 025       | 094     | 090   | 00598        | 00600   |
| 100    | 025       | 094     | 092   | 00586        | 00587   |
| 100    | 025       | 094     | 094   | 00574        | 00575   |
| 100    | 025       | 094     | 096   | 00562        | 00564   |
| 100    | 025       | 094     | 098   | 00551        | 00553   |
| 100    | 025       | 094     | 100   | 00541        | 00542   |
| 100    | 025       | 098     | 006   | 05045        | 04980   |
| 100    | 025       | 098     | 010   | 03866        | 03835   |
| 100    | 025       | 098     | 020   | 02373        | 02364   |
| 100    | 025       | 098     | 040   | 01323        | 01322   |
| 100    | 025       | 098     | 060   | 00915        | 00916   |
| 100    | 025       | 098     | 080   | 00699        | 00700   |
| 100    | 025       | 098     | 084   | 00667        | 00669   |
| 100    | 025       | 098     | 088   | 00638        | 00640   |
| 100    | 025       | 098     | 090   | 00625        | 00626   |
| 100    | 025       | 098     | 092   | 00612        | 00613   |
| 100    | 025       | 098     | 094   | 00599        | 00601   |
| 100    | 025       | 098     | 096   | 00587        | 00589   |
| 100    | 025       | 098     | 098   | 00576        | 00578   |
| 100    | 025       | 098     | 100   | 00565        | 00567   |



TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_{\phi}^*$ | $I_{\tau}^*$ |
|--------|-----------|---------|-------|--------------|--------------|
| 1.00   | 0.25      | 1.00    | 0.06  | 0.5153       | 0.5086       |
| 1.00   | 0.25      | 1.00    | 0.10  | 0.3948       | 0.3917       |
| 1.00   | 0.25      | 1.00    | 0.20  | 0.2423       | 0.2415       |
| 1.00   | 0.25      | 1.00    | 0.40  | 0.1351       | 0.1351       |
| 1.00   | 0.25      | 1.00    | 0.60  | 0.0935       | 0.0936       |
| 1.00   | 0.25      | 1.00    | 0.80  | 0.0714       | 0.0715       |
| 1.00   | 0.25      | 1.00    | 0.84  | 0.0682       | 0.0683       |
| 1.00   | 0.25      | 1.00    | 0.88  | 0.0652       | 0.0654       |
| 1.00   | 0.25      | 1.00    | 0.90  | 0.0638       | 0.0640       |
| 1.00   | 0.25      | 1.00    | 0.92  | 0.0625       | 0.0627       |
| 1.00   | 0.25      | 1.00    | 0.94  | 0.0612       | 0.0614       |
| 1.00   | 0.25      | 1.00    | 0.96  | 0.0600       | 0.0602       |
| 1.00   | 0.25      | 1.00    | 0.98  | 0.0588       | 0.0590       |
| 1.00   | 0.25      | 1.00    | 1.00  | 0.0577       | 0.0579       |
| 1.00   | 0.50      | 0.02    | 0.02  | 0.0131       | 0.0127       |
| 1.00   | 0.50      | 0.02    | 0.04  | 0.0117       | 0.0114       |
| 1.00   | 0.50      | 0.02    | 0.06  | 0.0101       | 0.0100       |
| 1.00   | 0.50      | 0.02    | 0.08  | 0.0088       | 0.0087       |
| 1.00   | 0.50      | 0.02    | 0.10  | 0.0077       | 0.0077       |
| 1.00   | 0.50      | 0.02    | 0.12  | 0.0069       | 0.0068       |
| 1.00   | 0.50      | 0.02    | 0.20  | 0.0047       | 0.0047       |
| 1.00   | 0.50      | 0.02    | 0.40  | 0.0026       | 0.0026       |
| 1.00   | 0.50      | 0.02    | 0.60  | 0.0018       | 0.0018       |
| 1.00   | 0.50      | 0.02    | 0.80  | 0.0014       | 0.0014       |
| 1.00   | 0.50      | 0.02    | 0.90  | 0.0012       | 0.0012       |
| 1.00   | 0.50      | 0.02    | 0.94  | 0.0012       | 0.0012       |
| 1.00   | 0.50      | 0.02    | 0.98  | 0.0011       | 0.0011       |
| 1.00   | 0.50      | 0.02    | 1.00  | 0.0011       | 0.0011       |
| 1.00   | 0.50      | 0.10    | 0.06  | 0.0748       | 0.0738       |
| 1.00   | 0.50      | 0.10    | 0.08  | 0.0651       | 0.0644       |
| 1.00   | 0.50      | 0.10    | 0.10  | 0.0573       | 0.0568       |
| 1.00   | 0.50      | 0.10    | 0.12  | 0.0510       | 0.0507       |
| 1.00   | 0.50      | 0.10    | 0.14  | 0.0459       | 0.0456       |
| 1.00   | 0.50      | 0.10    | 0.16  | 0.0417       | 0.0415       |
| 1.00   | 0.50      | 0.10    | 0.18  | 0.0381       | 0.0380       |
| 1.00   | 0.50      | 0.10    | 0.20  | 0.0351       | 0.0350       |
| 1.00   | 0.50      | 0.10    | 0.40  | 0.0178       | 0.0176       |
| 1.00   | 0.50      | 0.10    | 0.60  | 0.0135       | 0.0135       |
| 1.00   | 0.50      | 0.10    | 0.80  | 0.0103       | 0.0103       |
| 1.00   | 0.50      | 0.10    | 0.90  | 0.0092       | 0.0092       |
| 1.00   | 0.50      | 0.10    | 0.94  | 0.0088       | 0.0088       |
| 1.00   | 0.50      | 0.10    | 0.98  | 0.0083       | 0.0083       |
| 1.00   | 0.50      | 0.10    | 1.00  | 0.0083       | 0.0084       |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$   | $I_1^*$   |
|--------|-----------|---------|-------|-----------|-----------|
| 1 0 0  | 0 5 0     | 0 2 0   | 0 0 6 | 0 1 7 7 1 | 0 1 7 4 8 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 1 0 | 0 1 3 5 7 | 0 1 3 4 6 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 1 4 | 0 1 0 8 7 | 0 1 0 8 1 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 1 8 | 0 0 9 0 4 | 0 0 9 0 0 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 2 0 | 0 0 8 3 3 | 0 0 8 3 0 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 2 4 | 0 0 7 1 9 | 0 0 7 1 8 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 2 8 | 0 0 6 3 3 | 0 0 6 3 2 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 3 2 | 0 0 5 6 5 | 0 0 5 6 4 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 4 0 | 0 0 4 6 4 | 0 0 4 6 4 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 6 0 | 0 0 3 2 1 | 0 0 3 2 1 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 8 0 | 0 0 2 4 5 | 0 0 2 4 6 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 9 0 | 0 0 2 1 9 | 0 0 2 2 0 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 9 4 | 0 0 2 1 0 | 0 0 2 1 1 |
| 1 0 0  | 0 5 0     | 0 2 0   | 0 9 8 | 0 0 2 0 2 | 0 0 2 0 3 |
| 1 0 0  | 0 5 0     | 0 2 0   | 1 0 0 | 0 0 1 9 8 | 0 0 1 9 9 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 0 6 | 0 3 9 3 1 | 0 3 8 8 1 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 1 0 | 0 3 0 1 2 | 0 2 9 8 9 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 2 0 | 0 1 8 4 9 | 0 1 8 4 3 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 2 8 | 0 1 4 0 5 | 0 1 4 0 2 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 3 2 | 0 1 2 5 4 | 0 1 2 5 2 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 3 6 | 0 1 1 3 2 | 0 1 1 3 1 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 4 0 | 0 1 0 3 1 | 0 1 0 3 0 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 4 4 | 0 0 9 4 7 | 0 0 9 4 7 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 5 2 | 0 0 8 1 4 | 0 0 8 1 4 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 6 0 | 0 0 7 1 3 | 0 0 7 1 4 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 8 0 | 0 0 5 4 4 | 0 0 5 4 6 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 9 0 | 0 0 4 8 7 | 0 0 4 8 8 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 9 4 | 0 0 4 6 7 | 0 0 4 6 8 |
| 1 0 0  | 0 5 0     | 0 4 0   | 0 9 8 | 0 0 4 4 9 | 0 0 4 5 0 |
| 1 0 0  | 0 5 0     | 0 4 0   | 1 0 0 | 0 0 4 4 0 | 0 0 4 4 1 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 0 6 | 0 6 1 2 4 | 0 6 0 4 5 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 1 0 | 0 4 6 9 3 | 0 4 6 5 6 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 2 0 | 0 2 8 8 0 | 0 2 8 7 0 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 4 0 | 0 1 6 0 6 | 0 1 6 0 5 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 5 2 | 0 1 2 6 8 | 0 1 2 6 8 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 5 6 | 0 1 1 8 4 | 0 1 1 8 5 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 6 0 | 0 1 1 1 1 | 0 1 1 1 2 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 6 4 | 0 1 0 4 6 | 0 1 0 4 7 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 6 8 | 0 0 9 8 9 | 0 0 9 9 0 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 7 2 | 0 0 9 3 7 | 0 0 9 3 9 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 8 0 | 0 0 8 4 8 | 0 0 8 5 0 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 9 0 | 0 0 7 5 9 | 0 0 7 6 0 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 9 4 | 0 0 7 2 8 | 0 0 7 3 0 |
| 1 0 0  | 0 5 0     | 0 6 0   | 0 9 8 | 0 0 6 9 9 | 0 0 7 0 1 |
| 1 0 0  | 0 5 0     | 0 6 0   | 1 0 0 | 0 0 6 8 6 | 0 0 6 8 8 |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$ | $I_r^*$ |
|--------|-----------|---------|-------|-------|---------|
| 100    | 050       | 080     | 006   | 08326 | 08219   |
| 100    | 050       | 080     | 010   | 06380 | 06330   |
| 100    | 050       | 080     | 020   | 03916 | 03903   |
| 100    | 050       | 080     | 040   | 02184 | 02183   |
| 100    | 050       | 080     | 060   | 01511 | 01512   |
| 100    | 050       | 080     | 068   | 01344 | 01346   |
| 100    | 050       | 080     | 072   | 01274 | 01276   |
| 100    | 050       | 080     | 076   | 01211 | 01213   |
| 100    | 050       | 080     | 080   | 01184 | 01186   |
| 100    | 050       | 080     | 084   | 01102 | 01104   |
| 100    | 050       | 080     | 088   | 01054 | 01056   |
| 100    | 050       | 080     | 090   | 01032 | 01034   |
| 100    | 050       | 080     | 094   | 00990 | 00992   |
| 100    | 050       | 080     | 098   | 00951 | 00954   |
| 100    | 050       | 080     | 100   | 00933 | 00935   |
| 100    | 050       | 090     | 006   | 09429 | 09307   |
| 100    | 050       | 090     | 010   | 07225 | 07168   |
| 100    | 050       | 090     | 020   | 04435 | 04420   |
| 100    | 050       | 090     | 040   | 02473 | 02472   |
| 100    | 050       | 090     | 060   | 01711 | 01712   |
| 100    | 050       | 090     | 080   | 01307 | 01309   |
| 100    | 050       | 090     | 084   | 01247 | 01250   |
| 100    | 050       | 090     | 088   | 01193 | 01196   |
| 100    | 050       | 090     | 090   | 01168 | 01171   |
| 100    | 050       | 090     | 092   | 01144 | 01147   |
| 100    | 050       | 090     | 094   | 01121 | 01124   |
| 100    | 050       | 090     | 096   | 01098 | 01101   |
| 100    | 050       | 090     | 098   | 01077 | 01080   |
| 100    | 050       | 090     | 100   | 01056 | 01059   |
| 100    | 050       | 094     | 006   | 09870 | 09743   |
| 100    | 050       | 094     | 010   | 07563 | 07504   |
| 100    | 050       | 094     | 020   | 04643 | 04626   |
| 100    | 050       | 094     | 040   | 02589 | 02588   |
| 100    | 050       | 094     | 060   | 01791 | 01792   |
| 100    | 050       | 094     | 080   | 01368 | 01370   |
| 100    | 050       | 094     | 084   | 01306 | 01309   |
| 100    | 050       | 094     | 088   | 01249 | 01252   |
| 100    | 050       | 094     | 090   | 01223 | 01226   |
| 100    | 050       | 094     | 092   | 01198 | 01201   |
| 100    | 050       | 094     | 094   | 01173 | 01176   |
| 100    | 050       | 094     | 096   | 01150 | 01153   |
| 100    | 050       | 094     | 098   | 01127 | 01131   |
| 100    | 050       | 094     | 100   | 01106 | 01109   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_z^*$ | $I_r^*$ |
|--------|-----------|---------|-------|---------|---------|
| 100    | 050       | 098     | 006   | 10312   | 10179   |
| 100    | 050       | 098     | 010   | 07902   | 07839   |
| 100    | 050       | 098     | 020   | 04850   | 04833   |
| 100    | 050       | 098     | 040   | 02705   | 02703   |
| 100    | 050       | 098     | 060   | 01871   | 01873   |
| 100    | 050       | 098     | 080   | 01429   | 01432   |
| 100    | 050       | 098     | 084   | 01364   | 01367   |
| 100    | 050       | 098     | 088   | 01305   | 01308   |
| 100    | 050       | 098     | 090   | 01278   | 01281   |
| 100    | 050       | 098     | 092   | 01251   | 01254   |
| 100    | 050       | 098     | 094   | 01226   | 01229   |
| 100    | 050       | 098     | 096   | 01201   | 01205   |
| 100    | 050       | 098     | 098   | 01178   | 01181   |
| 100    | 050       | 098     | 100   | 01155   | 01159   |
| 100    | 050       | 100     | 006   | 10532   | 10397   |
| 100    | 050       | 100     | 010   | 08071   | 08007   |
| 100    | 050       | 100     | 020   | 04954   | 04937   |
| 100    | 050       | 100     | 040   | 02763   | 02761   |
| 100    | 050       | 100     | 060   | 01911   | 01913   |
| 100    | 050       | 100     | 080   | 01459   | 01462   |
| 100    | 050       | 100     | 084   | 01393   | 01397   |
| 100    | 050       | 100     | 088   | 01333   | 01336   |
| 100    | 050       | 100     | 090   | 01305   | 01308   |
| 100    | 050       | 100     | 092   | 01278   | 01281   |
| 100    | 050       | 100     | 094   | 01252   | 01255   |
| 100    | 050       | 100     | 096   | 01227   | 01230   |
| 100    | 050       | 100     | 098   | 01203   | 01206   |
| 100    | 050       | 100     | 100   | 01180   | 01183   |
| 100    | 080       | 002     | 002   | 00216   | 00209   |
| 100    | 080       | 002     | 004   | 00192   | 00188   |
| 100    | 080       | 002     | 006   | 00166   | 00164   |
| 100    | 080       | 002     | 008   | 00145   | 00143   |
| 100    | 080       | 002     | 010   | 00127   | 00126   |
| 100    | 080       | 002     | 012   | 00113   | 00113   |
| 100    | 080       | 002     | 020   | 00078   | 00078   |
| 100    | 080       | 002     | 040   | 00043   | 00043   |
| 100    | 080       | 002     | 060   | 00030   | 00030   |
| 100    | 080       | 002     | 080   | 00023   | 00023   |
| 100    | 080       | 002     | 090   | 00020   | 00020   |
| 100    | 080       | 002     | 094   | 00019   | 00019   |
| 100    | 080       | 002     | 098   | 00019   | 00019   |
| 100    | 080       | 002     | 100   | 00018   | 00018   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$ | $I_F^*$ |
|--------|-----------|---------|-------|-------|---------|
| 100    | 080       | 010     | 006   | 01229 | 01213   |
| 100    | 080       | 010     | 008   | 01070 | 01059   |
| 100    | 080       | 010     | 010   | 00942 | 00934   |
| 100    | 080       | 010     | 012   | 00838 | 00833   |
| 100    | 080       | 010     | 014   | 00754 | 00750   |
| 100    | 080       | 010     | 016   | 00685 | 00682   |
| 100    | 080       | 010     | 018   | 00627 | 00625   |
| 100    | 080       | 010     | 020   | 00578 | 00576   |
| 100    | 080       | 010     | 040   | 00322 | 00322   |
| 100    | 080       | 010     | 060   | 00223 | 00223   |
| 100    | 080       | 010     | 080   | 00170 | 00170   |
| 100    | 080       | 010     | 090   | 00152 | 00152   |
| 100    | 080       | 010     | 094   | 00146 | 00146   |
| 100    | 080       | 010     | 098   | 00140 | 00140   |
| 100    | 080       | 010     | 100   | 00137 | 00138   |
| 100    | 080       | 020     | 006   | 02911 | 02873   |
| 100    | 080       | 020     | 010   | 02231 | 02213   |
| 100    | 080       | 020     | 014   | 01787 | 01777   |
| 100    | 080       | 020     | 018   | 01485 | 01480   |
| 100    | 080       | 020     | 020   | 01369 | 01364   |
| 100    | 080       | 020     | 024   | 01183 | 01179   |
| 100    | 080       | 020     | 028   | 01040 | 01038   |
| 100    | 080       | 020     | 032   | 00928 | 00927   |
| 100    | 080       | 020     | 040   | 00763 | 00763   |
| 100    | 080       | 020     | 060   | 00528 | 00528   |
| 100    | 080       | 020     | 080   | 00403 | 00404   |
| 100    | 080       | 020     | 090   | 00360 | 00361   |
| 100    | 080       | 020     | 094   | 00346 | 00347   |
| 100    | 080       | 020     | 098   | 00332 | 00333   |
| 100    | 080       | 020     | 100   | 00326 | 00327   |
| 100    | 080       | 040     | 006   | 06461 | 06378   |
| 100    | 080       | 040     | 010   | 04951 | 04912   |
| 100    | 080       | 040     | 020   | 03039 | 03028   |
| 100    | 080       | 040     | 028   | 02309 | 02305   |
| 100    | 080       | 040     | 032   | 02061 | 02058   |
| 100    | 080       | 040     | 036   | 01860 | 01858   |
| 100    | 080       | 040     | 040   | 01695 | 01694   |
| 100    | 080       | 040     | 044   | 01556 | 01556   |
| 100    | 080       | 040     | 052   | 01337 | 01338   |
| 100    | 080       | 040     | 060   | 01172 | 01173   |
| 100    | 080       | 040     | 080   | 00895 | 00897   |
| 100    | 080       | 040     | 090   | 00800 | 00802   |
| 100    | 080       | 040     | 094   | 00768 | 00770   |
| 100    | 080       | 040     | 098   | 00738 | 00740   |
| 100    | 080       | 040     | 100   | 00724 | 00726   |

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TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I^*$ | $I_r^*$ |
|--------|-----------|---------|-------|-------|---------|
| 100    | 080       | 060     | 006   | 10065 | 09935   |
| 100    | 080       | 060     | 010   | 07712 | 07652   |
| 100    | 080       | 060     | 020   | 04734 | 04718   |
| 100    | 080       | 060     | 040   | 02640 | 02638   |
| 100    | 080       | 060     | 052   | 02083 | 02084   |
| 100    | 080       | 060     | 056   | 01946 | 01948   |
| 100    | 080       | 060     | 060   | 01826 | 01828   |
| 100    | 080       | 060     | 064   | 01720 | 01722   |
| 100    | 080       | 060     | 068   | 01625 | 01627   |
| 100    | 080       | 060     | 072   | 01540 | 01543   |
| 100    | 080       | 060     | 080   | 01395 | 01397   |
| 100    | 080       | 060     | 090   | 01247 | 01250   |
| 100    | 080       | 060     | 094   | 01196 | 01199   |
| 100    | 080       | 060     | 098   | 01150 | 01153   |
| 100    | 080       | 060     | 100   | 01127 | 01131   |
| 100    | 080       | 080     | 006   | 13683 | 13507   |
| 100    | 080       | 080     | 010   | 10485 | 10403   |
| 100    | 080       | 080     | 020   | 06436 | 06414   |
| 100    | 080       | 080     | 040   | 03590 | 03587   |
| 100    | 080       | 080     | 060   | 02483 | 02485   |
| 100    | 080       | 080     | 068   | 02210 | 02213   |
| 100    | 080       | 080     | 072   | 02094 | 02098   |
| 100    | 080       | 080     | 076   | 01990 | 01994   |
| 100    | 080       | 080     | 080   | 01896 | 01900   |
| 100    | 080       | 080     | 084   | 01811 | 01814   |
| 100    | 080       | 080     | 088   | 01732 | 01736   |
| 100    | 080       | 080     | 090   | 01695 | 01700   |
| 100    | 080       | 080     | 094   | 01627 | 01631   |
| 100    | 080       | 080     | 098   | 01563 | 01567   |
| 100    | 080       | 080     | 100   | 01533 | 01538   |
| 100    | 080       | 090     | 006   | 15495 | 15296   |
| 100    | 080       | 090     | 010   | 11674 | 11731   |
| 100    | 080       | 090     | 020   | 07288 | 07263   |
| 100    | 080       | 090     | 040   | 04065 | 04062   |
| 100    | 080       | 090     | 060   | 02812 | 02814   |
| 100    | 080       | 090     | 080   | 02147 | 02152   |
| 100    | 080       | 090     | 084   | 02050 | 02055   |
| 100    | 080       | 090     | 088   | 01962 | 01966   |
| 100    | 080       | 090     | 090   | 01920 | 01925   |
| 100    | 080       | 090     | 092   | 01880 | 01885   |
| 100    | 080       | 090     | 094   | 01842 | 01847   |
| 100    | 080       | 090     | 096   | 01805 | 01810   |
| 100    | 080       | 090     | 098   | 01770 | 01775   |
| 100    | 080       | 090     | 100   | 01736 | 01741   |

TABLE 5 Intensities (Continued)

| $\tau$ | $\lambda$ | $\mu_0$ | $\mu$ | $I_0^*$ | $I_1^*$ |
|--------|-----------|---------|-------|---------|---------|
| 1.00   | 0.80      | 0.94    | 0.06  | 1.6221  | 1.6011  |
| 1.00   | 0.80      | 0.94    | 0.10  | 1.2429  | 1.2332  |
| 1.00   | 0.80      | 0.94    | 0.20  | 0.7630  | 0.7603  |
| 1.00   | 0.80      | 0.94    | 0.40  | 0.4255  | 0.4253  |
| 1.00   | 0.80      | 0.94    | 0.60  | 0.2943  | 0.2946  |
| 1.00   | 0.80      | 0.94    | 0.80  | 0.2248  | 0.2252  |
| 1.00   | 0.80      | 0.94    | 0.84  | 0.2146  | 0.2151  |
| 1.00   | 0.80      | 0.94    | 0.88  | 0.2053  | 0.2058  |
| 1.00   | 0.80      | 0.94    | 0.90  | 0.2010  | 0.2015  |
| 1.00   | 0.80      | 0.94    | 0.92  | 0.1968  | 0.1973  |
| 1.00   | 0.80      | 0.94    | 0.94  | 0.1928  | 0.1933  |
| 1.00   | 0.80      | 0.94    | 0.96  | 0.1890  | 0.1895  |
| 1.00   | 0.80      | 0.94    | 0.98  | 0.1853  | 0.1858  |
| 1.00   | 0.80      | 0.94    | 1.00  | 0.1817  | 0.1823  |
| 1.00   | 0.80      | 0.98    | 0.06  | 1.6946  | 1.6727  |
| 1.00   | 0.80      | 0.98    | 0.10  | 1.2985  | 1.2883  |
| 1.00   | 0.80      | 0.98    | 0.20  | 0.7971  | 0.7943  |
| 1.00   | 0.80      | 0.98    | 0.40  | 0.4445  | 0.4443  |
| 1.00   | 0.80      | 0.98    | 0.60  | 0.3075  | 0.3078  |
| 1.00   | 0.80      | 0.98    | 0.80  | 0.2348  | 0.2353  |
| 1.00   | 0.80      | 0.98    | 0.84  | 0.2242  | 0.2247  |
| 1.00   | 0.80      | 0.98    | 0.88  | 0.2145  | 0.2150  |
| 1.00   | 0.80      | 0.98    | 0.90  | 0.2100  | 0.2105  |
| 1.00   | 0.80      | 0.98    | 0.92  | 0.2056  | 0.2062  |
| 1.00   | 0.80      | 0.98    | 0.94  | 0.2014  | 0.2020  |
| 1.00   | 0.80      | 0.98    | 0.96  | 0.1974  | 0.1980  |
| 1.00   | 0.80      | 0.98    | 0.98  | 0.1936  | 0.1941  |
| 1.00   | 0.80      | 0.98    | 1.00  | 0.1899  | 0.1904  |
| 1.00   | 0.80      | 1.00    | 0.06  | 1.7308  | 1.7085  |
| 1.00   | 0.80      | 1.00    | 0.10  | 1.3263  | 1.3159  |
| 1.00   | 0.80      | 1.00    | 0.20  | 0.8141  | 0.8113  |
| 1.00   | 0.80      | 1.00    | 0.40  | 0.4541  | 0.4538  |
| 1.00   | 0.80      | 1.00    | 0.60  | 0.3141  | 0.3143  |
| 1.00   | 0.80      | 1.00    | 0.80  | 0.2399  | 0.2403  |
| 1.00   | 0.80      | 1.00    | 0.84  | 0.2290  | 0.2295  |
| 1.00   | 0.80      | 1.00    | 0.88  | 0.2191  | 0.2196  |
| 1.00   | 0.80      | 1.00    | 0.90  | 0.2145  | 0.2150  |
| 1.00   | 0.80      | 1.00    | 0.92  | 0.2100  | 0.2106  |
| 1.00   | 0.80      | 1.00    | 0.94  | 0.2058  | 0.2063  |
| 1.00   | 0.80      | 1.00    | 0.96  | 0.2017  | 0.2022  |
| 1.00   | 0.80      | 1.00    | 0.98  | 0.1977  | 0.1983  |
| 1.00   | 0.80      | 1.00    | 1.00  | 0.1939  | 0.1945  |

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  - WCLGH (1)
- 1 Commanding General, Air Force Armament Center, Eglin Air Force Base
- 3 Commanding General, Air Research and Development Command
  - WDDOG (Lt. Col. Kodis) (2)
- 5 National Bureau of Standards, Institute of Numerical Analysis, Attn: Dr. Gertrude Blanch
- 1 Air Force Cambridge Research Center, Geophysical Research Division
- 1 Assistant for Atomic Energy, DCS/O, Headquarters, U. S. Air Force, Attn: AFCAI-1
- 1 American Meteorological Society, Attn: Malcolm Rigby
- 1 Office of the Chief Signal Officer, Engineering and Technical Division, Attn: SIGCE-M

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- 1 Bureau of Aeronautics Project "ARCWA", Naval Air Station, Virginia
- 1 Air Coordinating Committee, Subcommittee on Aviation Meteorology
- 1 University of Utah, Attn: Department of Meteorology
- 1 New York University, Attn: Department of Meteorology
- 1 Detachment Commander, Weather Detachment 28-6, APO #125, c/o Post Master, New York
- 1 Detachment Commander, Weather Detachment 18-19, APO #57, c/o Post Master, New York
- 1 Commanding Officer, Third Weather Group, ENT Air Force Base
- 1 Commanding Officer, 2143rd AMW, APO #925, c/o Post Master, San Francisco
- 1 Commanding Officer, First Weather Group, Offutt Air Force Base
- 1 Commanding Officer, Eighth Weather Squadron, APO #862, c/o Post Master, New York
- 1 Commanding Officer, Fourth Weather Group, P.O. Box 1395, Baltimore
- 1 Commanding Officer, 2058th AMW, APO #633, c/o Post Master, New York
- 1 Commanding Officer, Second Weather Group, Langley Air Force Base
- 1 Commanding Officer, Seventh Weather Group, APO #942, c/o Post Master, Seattle
- 1 Commanding Officer, Sixth Weather Group, Wright-Patterson Air Force Base
- 1 Commanding Officer, Eighth Weather Group, Scott Air Force Base
- 1 Commanding Officer, Ninth Weather Group, Andrews Air Force Base
- 1 Commanding Officer, Evans Signal Laboratory, Belmar, New Jersey, Attn: Chief, Meteorological Branch
- 1 Research and Development Board, Committee on Geophysics and Geography
- 1 Air Training Command, Extension Courses Unit (Weather), 5345th Technical Training Group, Chanute Air Force Base
- 1 Commanding Officer, Holloman Air Development Center, Holloman Air Force Base, Attn: EHOAM
- 1 Office of Naval Research, Attn: Geophysics (Code N416)
- 1 Chief of Naval Operations, Attn: Aerology
- 1 Office of Technical Services, Department of Commerce, Attn: Mrs. Dorothy Graff
- 1 Commanding General, Air Weather Service, U. S. Air Force, Washington, D. C., Attn: DSS, Technical Information Branch
- 1 Johns Hopkins University, Laboratory of Climatology, Seabrook, New Jersey, Attn: Department Head
- 1 Massachusetts Institute of Technology, Attn: Chairman, Department of Meteorology
- 2 Armed Services Technical Information Agency, Documents Services Center

- 1 National Advisory Committee for Aeronautics
- 1 U. S. Weather Bureau, 24 and M Streets, Washington 25, D. C.,  
Attn: Dr. Ross Gunn
- 1 University of Washington, Attn: Department of Meteorology and  
Climatology
- 1 University of Chicago, Attn: Department of Meteorology
- 1 American Meteorological Society, 3 Joy Street, Boston 8, Attn:  
Office of the Executive Secretary
- 1 Air Weather Service, Andrews Air Force Base, Attn: Major General  
W. O. Senter
- 1 Aerophysics Research Foundation, Santa Barbara Municipal Airport
- 1 University of New Mexico, Attn: Dr. V. H. Regener
- 1 Ohio State University, Attn: Department of Physics
- 1 University of Florida, Department of Electrical Engineering,  
Attn: Research Professor of Aerological Engineering
- 7 University of California at Los Angeles  
Department of Meteorology (6)  
Department of Physics, Attn: Dr. Joseph Kaplan (1)
- 1 University of Minnesota, Attn: Dr. Athelston Spilhaus
- 1 Harvard College Observatory, Attn: Dr. Fred L. Whipple
- 1 Director, Air University Library, Maxwell Air Force Base,  
Attn: CR4582
- 1 State Water Survey Division, Urbana, Illinois, Attn: G. S. Stout,  
Meteorologist
- 1 Johns Hopkins University, Attn: Dr. John D. Strong
- 3 Chief, U. S. Weather Bureau, Department of Commerce  
Library (1)  
Special Scientific Services Section (1)  
Dr. Harry Wexler (1)
- 1 Project Black Sheep, MacDill Air Force Base
- 1 U. S. Fleet Weather Control, Navy #943, FPO, San Francisco
- 1 U. S. Fleet Weather Control, Marine Corps Air Station, Miami

# ABSTRACT CARD

## Naval Ordnance Test Station

Tables Relating to Rayleigh . . . (Card 2)  
the second approximation is an adequate approximation. The following tables present the result of computation based on the second approximation only. They contain the intensities in the direction perpendicular and parallel to the vertical plane through the zenith and the sun (sun's vertical) for different zenith distances along this plane and for different zenith distances of the sun.

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Tables Relating to Rayleigh Scattering of Light in the Atmosphere (Numerical Solution of Chandrasekhar's Equations), by Zderek Sekera, University of California, Los Angeles, and Edward V. Ashburn. China Lake, Calif., NORS, 2 October 1953. (NAVORD Report 2061, NORS 757.)

(Over)

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ABSTRACT. The theory of molecular scattering of light in a plane-parallel atmosphere, presented in the simplest form by Lord Rayleigh, was recently extended in an ingenious way by Chandrasekhar to cover the process of multiple scattering and the effect of the reflection from the ground.

The computation of the intensity and polarization of the sky radiation by this theory requires the solution of four pairs of non-linear integral equations, obtained in the general case by successive iteration. For small values of the optical thickness  $\tau$  ( $\tau \leq 0.10$ ),

(Contd. of C.N. 2)